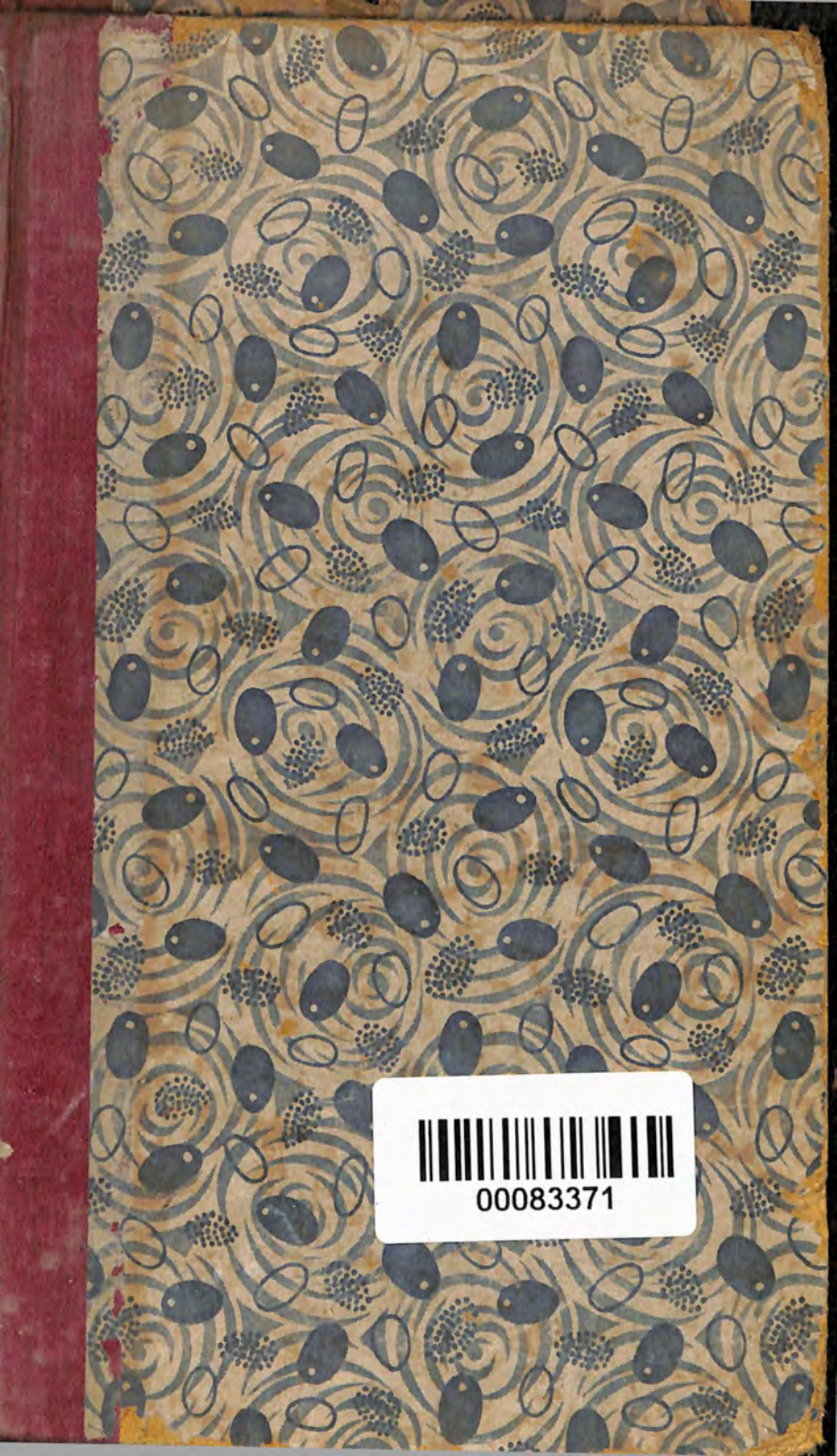
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RESEARCHES

IN

ASIA MINOR.

RESEARCHES

IN

ASIA MINOR, PONTUS,

AND

ARMENIA;

WITH

SOME ACCOUNT OF THEIR ANTIQUITIES AND GEOLOGY.

BY

WILLIAM J. HAMILTON,

SECRETARY TO THE GEOLOGICAL SOCIETY.

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IN TWO VOLUMES.

VOL. I.

LONDON:
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1842.

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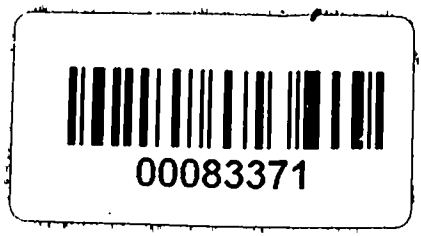

PREFACE.

In offering the following pages to the public, with the New Map of Asia Minor, by which they are accompanied, I wish to say a few words respecting the motives which led me to the East, and the objects which I had in view while there, and also to state my reasons for entering upon minute geographical details, which are, perhaps, uninteresting to the general reader.

In the early part of 1835, while meditating an excursion to the continent of Europe, I was induced, in preference, to direct my attention to some of the Turkish provinces in Asia, as comparatively unknown, and which could not fail to present discoveries interesting to the antiquary, the geographer, and the geologist. I accordingly arranged a plan, which at the same time promised to gratify my love of travel, and to rekindle those classic associations which are connected with our early habits. The following three or four months were passed in preparing for the task, in examining the ancient writers, and in acquiring the use of the sextant and circle: in the last of these pur-

suits I was much indebted to the assistance of my brother, Commander H. G. Hamilton, R.N.

I consider myself most fortunate in having persuaded Mr. Hugh E. Strickland, of Cracombe House, near Evesham, to accompany me: in proportion to the value of his co-operation, both as a companion and a naturalist, was my regret at our separation, when he was compelled to return to England in the beginning of 1836. The geological investigation of the country has suffered much from this last circumstance: it may be long before a geologist with such an accurate knowledge of conchology will have an opportunity of exploring many parts of the country which I visited. But in the other branches of natural history his loss is still more to be regretted: I had some knowledge of geology, but in ornithology, as well as in entomology, Asia Minor would have afforded him an equally abundant harvest.

My attention was consequently directed chiefly to the comparative geography of the country, the examination of ancient ruins, and the fixing of positions by astronomical observations. The geology of the country, also, claimed a large portion of my time; and, considering the difficulty of transport which I had to encounter, I may deem myself fortunate in having made a large collection of rocks and minerals.

I soon found that the maps of the country were incorrect in the highest degree; in fact, absolutely useless. I therefore spared neither time nor labour in making a careful annotation of time, distances,

and directions, by which means, together with astronomical observations for latitude, I hoped to be able to construct a more correct map of those parts of the peninsula through which I passed. With this object in view, and independently of a very detailed Journal, I succeeded in keeping, with a very few exceptions, a minute Itinerary of every mile of road, noting the exact time of departure, and, with my compass constantly in hand, the direction of the road, as well as every change, sometimes to the number of twenty or twenty-five in an hour, adding remarks suggested by the physical structure of the country. A specimen of this Itinerary, representing one day's work, will be found in the Appendix, vol. ii., p. 397.

In order to construct the Map, after my return to England, the whole of the route, extending over several thousand miles of road, was laid down on the scale of one inch to a mile: in this task I received much assistance from Captain H. G. Hamilton. The neighbouring country was then worked in from my geographical notes and cross bearings; after which it was corrected for the observations of latitude, worked out by the same officer, and then reduced by him to the scale of five miles to an inch. In this state it was put into the hands of Mr. J. Arrowsmith, whom I cannot sufficiently thank for the manner in which he has executed his part of the labour. I may add, that in those parts of the country through which I passed, all the positions have been laid down from my own observations, with the exception of the lines

of coast, which have been taken from the naval surveys, and a portion of that of the Euxine from Mr. Ainsworth's map. In other parts of the country I have introduced the routes of Messrs. Ainsworth, Fellowes, Brant, and others whose observations seemed entitled to credit; amongst which Colonel Chesney's delineation of the country round the Gulf of Scanderoun, and the Syrian passes, together with the neighbouring mountains, is one of the most important. For the coasts of Ionia and Caria, and other portions of the western shores of Asia Minor, I am indebted to Captain Beaufort, who kindly placed at my disposal the excellent charts constructed by the officers employed on the surveys carried on by Captains Copeland and Graves.

In conclusion I have only to say that the form and style of my own Journal have been preserved as closely as possible: this may occasionally have led to repetitions, and caused a certain degree of monotony in the language; but I thought it best calculated to convey to the reader a true impression of the geographical character of the country, and to create a greater feeling of curiosity and interest in the progressive discoveries.

London, May, 1842.

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INTRODUCTION.

No country in the world presents, perhaps, more interesting associations to the geographer, the historian, and the antiquary than Asia Minor. It has hitherto, however, been comparatively but little visited, and its geography has been very superficially explored. It is no exaggeration to say that there is scarcely a spot of ground, however small, throughout this extensive peninsula, which does not contain some relic of antiquity, or is not more or less connected with that History which, through an uninterrupted period of more than thirty centuries, records the most spirit-stirring events in the destinies of the human race, and during which time this country attracted the attention of the world as the battle-field of powerful nations.

Other countries and other people have flourished for a time, and may have left behind them a stronger feeling of interest in the thoughts and speculations of mankind. But this remarkable difference exists between them, that, while they have attracted paramount attention for a century or more, having risen to eminence only to fall into a greater depth of barbarism, Asia Minor has continued to be a main point of interest and attraction from the very beginning of the historic period.

It may indeed be true, when we turn over the first pages of the Annals of the World, that Asia Minor was only of secondary importance when the dynasties of the Pharaohs ruled in Egypt. When the sons of Israel went down to

buy corn of the Egyptian kings, we read not of the civilization of Asia Minor, nor did she produce at any period such structures as the Pyramids, or the Temples of the Nile, to record the talents of her architects, or the perseverance of her people: it may be that the student of history will hardly find, during the most flourishing periods of the Ionian commonwealth, a galaxy of talent, patriotism, and courage equal to that which spreads its brightness over the palmy days of Athens; when science, literature, and arts flourished under the Ægis of Minerva, and the greatest of her military heroes did not disdain to take lessons from philosophers, or to superintend the labours of the sculptor, the painter, and the architect.

Again: if we look to the history of ancient Rome, and consider the events which occurred there during a thousand years, we may possibly find more to admire and to attract our attention than anything which the history of Asia Minor can afford. The systematic legislation and constitution of the Roman republic—the unrestrained power of the Emperors—the schemes of conquest carried on under both forms of government—and the boundless wealth amassed in the first years of the Empire, are some of its characteristic features which have never been repeated elsewhere.

And to mention but one instance more, there was a period when Syria also was itself an object of greater interest than any other district in the universe ever was, either before or since. The birth of our Saviour, and the events which took place at Jerusalem during His abode on earth, have stamped upon that part of Syria a degree of interest and lofty association which bears no parallel.

But the interest of Asia Minor attaches, in a greater or less degree, to all ages, from the first dawn of history, through the classic periods of the Greek republics, and the

darker ages of Byzantine misrule, down to the very times in which we live. Without pretending to give even a faint sketch of its history, I shall here refer to a few of the most interesting points by which this part of the old world has been distinguished.

It was scarcely four hundred years after the Mosaic Deluge when the inhabitants of Mesopotamia were compelled by their numbers to spread themselves over various districts of the earth. In the name of Lydia, and its king Lydus, we recognise one branch of the descendants of the patriarch; the family of Lud, which, conducted either by himself or his descendants, first peopled the wilds of Asia Minor, and at length settled in the plains of Lydia, on the banks of the Hermus. Moreover, the early traditions of the Lydians, and their worship of the god Men, or Menes, singularly coincide with their origin from the inhabitants of Mesopotamia, the descendants of the patriarch Noah*.

Here, too, was the scene of those remarkable events which the learning or the imagination of the early poets have attributed to the Heroic Age. The Argonautic expedition, starting from the coast of Thessaly, proceeded through the Propontis and the Euxine, and along the shores of Bithynia, Paphlagonia, and Pontus, visiting various nations, the descriptions of which have been handed down to us with an accuracy worthy of admiration. But a still more interesting locality is presented to us on the shores of Asia Minor. Between the Simois and Scamander, and on the plains of Troy, we may visit the spot where, in the imagination of the poet, the gods of antiquity descended from Olympus, and joined in the sports and contests of mankind.

As we approach the period of classic history, the import-

* See Note A, Vol. II., p. 383, where I have endeavoured to show, on the authority of the Abbé Guerin de Rocher, that the Men, or Manes, of the Lydians, as well as of the Egyptians, was no other than their common ancestor Noah.

ance of the country increases. The town of Sardis was built near the confluence of the gold-bearing Pactolus and the Hermus; and we are dazzled by the accounts of the wealth of Crœsus, which attracted the arms, and fell under the bravery, of the Persians, who, having crossed the Halys, established their seat of government at Sardis, in the year 548 B.C. Here they reigned for upwards of two hundred years, during which period Sardis was sacked by the troops of Athens; and the myriads of Darius and of Xerxes in vain attempted to revenge the insult by putting chains on a band of freemen.

After this came the expedition of the younger Cyrus, and the retreat of the Ten Thousand; and numerous Greek cities, chiefly on the coast of Ionia, Æolia, and Caria, founded by emigrants and exiles from the parent states of Greece, had in the mean time sprung up, flourished, and increased; at one period independent, at another subject to Persian rule, but ever sending forth a supply of learned men, who, in the pursuits of philosophy, music, history, sculpture, painting, and architecture, were no mean rivals of their European instructors.

But Asia Minor became again the scene of war and conquest. The battle of the Granicus was an auspicious commencement of the expedition of Alexander, and his conquest of the peninsula was secured by the battle of Issus. But the empire which he founded fell to pieces when the hand which had formed it no longer governed. His conquests fell into the hands of rival generals, and the plains of Asia Minor were amongst the prizes for which they fought. Antigonus, Eumenes, and Lysimachus established themselves in various parts with various success; but a line of kings reigned at Pergamus in uninterrupted succession until Attalus Philopater, in 133 B.C., bequeathed his kingdom to the Roman people.

Another element of discord was thus introduced into this country. Many years intervened before Rome could be said to have obtained quiet possession of the bequest. Since the death of Alexander a rival power to that of the kings of Pergamus had been silently growing up in the distant province of Pontus, the last king of which, Mithridates Eupator, exerted all his extraordinary energies, and the resources of his people, in opposing, and for a long time with success, the advance of the Roman arms. In Cappadocia and in Pontus, in Isauria and in the mountainous districts of Cilicia, the rocky and almost impenetrable nature of the country enabled the native tribes long to resist the invader; and it was not until the time of Julius Cæsar and his successor, that the whole peninsula became an integral portion of the territories of the Mistress of the World. The accounts of these long-contested engagements form some of the most interesting pages in the works of the writers of the Augustan Age.

Another and a brighter epoch was now to dawn upon this portion of the world; every province and every district felt the influence of the high civilization and luxurious habits of Rome during the first years of the Imperial Government. New towns owed the splendour and magnificence of their public buildings to the protection of the Emperors, while those which had suffered during the wars were rebuilt and enriched by the same liberal hands. New honours and privileges were granted to them, and the products of a favoured clime received fresh encouragement from universal peace. Even those convulsive throes of Nature which, during this period, destroyed many of her cities and temples, were but incentives to renewed acts of liberality, as is attested by the coins and the inscriptions, which the traveller meets with in almost every part of this peninsula.

But this prosperity was of short duration; the luxury and the extent of the Roman Empire brought with them the accompanying cankers of weakness and dissolution. Rebellion at home and insurrection on the frontiers, attended by military insubordination, soon changed the fair features of peace into the distorted aspect of war; plenty gave way to misery, and religious zeal lent its hand to increase the evil. Asia Minor could not be expected to escape the calamity—indeed, an undue proportion of wretchedness seems to have been her lot: for the establishment of the first Christian churches in her territory added fuel to the contests between the Pagans and the Christians; and while the latter destroyed the temples of Paganism, regardless of the beauty of the work or the skill of the builder, they met with personal cruelties and suffered worse persecutions at the hands of their idolatrous enemies.

A vain prospect of better days appeared, when Constantine, after fighting under the Cross and conquering Maxentius, laid the foundations of Constantinople on the site of Byzantium, the seat of the future Empire of the East. During this period the early history of the Church is intimately associated with that of Asia Minor. It is enough to allude to the celebrated Council of Nicæa and its creed, and to mention the names of George of Cappadocia, Gregory of Nazianzus, Eusebius, and St. Basil of Cæsarea. The illusion soon vanished: the apostate Julian, carried along by a love of speculation, and fond of the philosophy of the Pagans, led the way, by his liberalism, to the establishment of those sects which long agitated the Eastern Empire, and shed their baneful influence over the Christians of the West. Amidst these calamities, the same hordes of barbarians who had sacked the plains of Italy and of Thrace carried desolation and ruin into the other parts of the empire; and while the nations of the West were falling

into the hands of successive northern chieftains, Asia Minor could not escape the ravages which overwhelmed the Eastern provinces.

The annals of the Byzantine Empire contain a melancholy list of acts of violence, intrigue, oppression, and vice. In Sapor, King of Persia, a powerful and determined enemy came to the aid of these domestic foes, and a long warfare was carried on against him with various success; the conquest or the defence of Asia Minor was the rich prize for which they fought. But it is most painful to reflect that some of the greatest cruelties and miseries which were suffered during the fifth century were owing to the dissensions of the Christian sects, in which the names of the two patriarchs, Nestorius of Constantinople and Cyril of Alexandria, were most conspicuous, and the city of Ephesus was the scene of their disgraceful quarrels.

In the reign of Justinian the contest with Persia still continued, and the gold-mines of Trebizond became a subject of dispute between the Greeks and Chosroës I. During this reign the name of the Turks first appears in the page of history. Having driven the Avars from their northern wildernesses, they reached the Caucasus, from whence they sent ambassadors to the Emperor. Mutual interests dictated the alliance between them and Justinian, against the Persians: this did not, however, long avail to protect the Empire of the East against the power of the Great King.

Heraclius ascended the throne A. D. 610, and in the following year Chosroës II. invaded the Empire; after the conquest of Syria, Palestine, and Egypt, his troops marched from the Euphrates to the Thracian Bosphorus,* devastating the sea-coast of Pontus, sacking Ancyra, and taking Chalcedon by storm. The heroism of Heraclius, which shone forth during the middle portion of his reign, saved

* Gibbon, Decl. and Fall, c. 46.

the capital and the Empire. Conveying his army by sea to the Gulf of Issus, and carrying the war into the enemy's country, he compelled the Persians to evacuate Asia Minor, and hasten to the defence of Dastagerd and Ctesiphon; and the battle of Nineveh (A. D. 627) reduced the haughty Chosroës to the state of a fugitive.

In the eighth century a new incentive to crime and folly burst upon the Eastern world. The worship of images, which had crept into the practice of the Church, now began to be looked upon as idolatry; and the vacillating Greeks were visited by this imputation on the one hand, or by the accusation of impiety on the other, if they renounced the practice. In the year 718 an adventurer from the mountains of Isauria, who had the command of the Anatolian legions, taking the name of Leo III., ascended the throne of Constantinople. The energy with which he adopted the views and directed the measures of the popular party, soon gained for him the name of The Iconoclast. The dispute ceased in 842, on the final establishment of the worship of images by the Empress Theodora.

But a fiercer and more lasting enemy had now made his appearance; unrelenting efforts were directed against the whole Christian world, from Jerusalem to the Pillars of Hercules and the shores of the Atlantic; and the plains of Asia Minor fell an easy prey to valour and numbers. Mahometanism had, during the last century, spread rapidly along the southern shores of the Mediterranean; and the worshippers of the Koran had recruited the ranks of the army of the Faithful with hosts of Arabs, Saracens, and Moors. The Caliph Haroun al Rashid twice crossed the plains of Phrygia and Bithynia to invest the heights of Scutari and the Pontic Heraclea, and compelled Nicephorus I. to pay him an annual tribute. Theophilus, son of Michael II., avenged these insults, and on his fifth

expedition penetrated into Syria; but the Caliph Motassem again ravaged the plains of Phrygia, and directed his efforts against Amorium, the birthplace of Michael. The Imperial army was routed and pursued to Dorylæum, which fell into the hands of the conqueror.

It is not necessary here to dwell upon the rise and progress of the Turkish nation, or to show how Togrul Bey, the grandson of Seljuk, became their leader after the defeat of Mahmoud of Ghusnéh. Alp Arslan, the nephew of Togrul, completed the conquest of Armenia and Georgia; but having penetrated into Phrygia, his troops were driven back to the Euphrates by the Emperor Romanus Diogenes, a brave soldier, whom the Empress Eudocia had espoused, for the safety of the state. The battle of Malaskerd was, however, imprudently fought and lost by the Emperor, in August, 1071, when the power of the house of Seljuk was established, and the Asiatic provinces of Rome, now lost to Christendom, were soon after overrun by the five sons of Cutulmish, a prince of the house of Seljuk, who established their camp at Kutahiyah. On the death of Alp Arslan by the hand of an assassin, he was succeeded by his son, the celebrated Malek Shah.

On his death, in 1092, his empire, extending from the Black Sea to the confines of Syria, and from the Euphrates to Constantinople, was divided amongst his five sons, the youngest of whom invaded the Roman provinces of Asia Minor, and after several years of treachery and folly on the part of the Greek commanders, the Sultan Soliman erected his palace and his fortress at Nicæa, the capital of Bithynia, and the seat of the Seljukian dynasty of Roum was planted within a hundred miles of Constantinople.

The general historian supplies ample details of these interesting events: Jerusalem, the holy city, the object of veneration and of pilgrimage, soon fell into the hands of

these Seljukian Turks. The hollow alliance between the Emperor and the Sultan of Nicæa was burst asunder; a thrill of horror vibrated from Constantinople to the distant shores of Britain at the conduct of the infidels, and a band of warriors rushed from every part of Christendom to the rescue of the Holy Sepulchre, and to release the Emperor of Byzantium from the iron grasp of his Turkish conqueror.

In the first Crusade their success began with the siege and conquest of Nicæa, and the plains of Asia Minor became again the battle-field of nations. Here the chivalry of Europe met the horsemen of the Sultan, and withstood their shock, and Dorylæum became a second time the scene of a decisive battle; the cities of Antioch of Pisidia and Iconium recruited the Crusaders, after an exhausting march through the bare and arid plains of Phrygia. Thence they crossed the mountain barrier of Taurus, and descending into Cilicia, proceeded to the conquest of Syria and the Holy Land. The establishment of the Genoese at Constantinople, and in numerous places along the coast and in the interior, followed the march of the Crusaders, and the Greek Emperor received an insidious foe into his confidence, instead of an open enemy at his door, whilst in the course of the ensuing half century the Seljukian Turks had again invaded Asia Minor, and re-established the flourishing kingdom of Iconium.

But soon a new power appeared on the stage of war. In the beginning of the thirteenth century Zengis Khan led his Mogul followers from their native deserts to the conquest of the world. Their progress was not checked by his death in 1227, for under his sons and grandsons their power extended over China, Persia, Hungary, Russia, and Syria; and when checked in Egypt, they spread themselves over Armenia and Asia Minor. Here the Sultans of Iconium offered some resistance to their progress, until Azad-

din sought refuge in Constantinople. But when at length the tide of Mogul conquest rolled back towards the East, the Seljukian dynasty of Iconium was extinct; Orthogrul, one of the followers of Aladdin, the last of their Sultans, pitched his camp of 400 families at Surghut, on the banks of the Sangarius; and his immediate descendants, having penetrated into Bithynia in 1299, established themselves soon after in the city of Brusa. The division of Anatolia amongst the Turkish Emirs was the immediate result of this conquest; the remaining Asiatic provinces, with the seven churches of Asia, were finally lost to the Christian Emperor, and the Turkish rulers of Lydia and Ionia still trample on the ruins of Christian monuments.

For above 150 years the Turks of the Ottoman line held possession of Anatolia, and the frequent contests which took place between them and the naval forces of the Christians only tended to increase the power of the Ottomans, to facilitate their passage into Europe, and to bring about their establishment in Thrace and in the neighbourhood of Adrianople. With the exception of the kingdom of Trebizond, Bajazet I. had conquered all the Asiatic provinces of the Emperor, and only a small extent of ground in the neighbourhood of Constantinople remained to him in Europe. From the Imperial residence at Brusa were issued commands almost to the Indus, and Constantinople itself appeared to be within the grasp of Bajazet. Already he had prepared his expedition, and the capital of the Empire was about to become his prey, when a temporary relief appeared from a new quarter, and Bajazet himself was overthrown by a stronger arm.

This rival power had sprung up in the wilds about Samarcand, and the world was again to be conquered by an army of Tartars and Moguls, under the command of Timour or Tamerlane. Persia, Tartary, and India had

already yielded to his arms before he turned them against the Ottoman Empire, influenced by the quarrels and dissensions which had arisen between Bajazet and his Christian neighbours. The genius of Tamerlane prevailed in the memorable battle of Angora; the Sultan lost at once his kingdom and his liberty, and the conqueror established himself at Kutahiyah. The sea put a limit to his progress, and, without the means of transporting his army into Europe, he meditated at Smyrna the conquest of China, but died on his march to the Celestial Empire.

Brusa became again, in 1403, the capital of the Ottoman Empire, and shared with Adrianople the honours of Imperial residence; but Anatolia was distracted for nearly forty years by the civil wars of the sons and descendants of Bajazet, until Mahomet II. ascended the throne, in 1451, to close the existence of the Byzantine Empire. Weakened and exhausted in each successive reign, and having lost one by one those rich and fertile provinces which formed the brightest gems in the Imperial diadem, Constantinople was reduced to the last stage of misery, even before the Turkish host had surrounded its triple fortifications. It still breathed with convulsive throbs, like a trunk deprived of its limbs, suffering under the last pulsations of life. Some Greeks displayed at the last moments an unavailing courage, even after the enemy had scaled the walls, but it only served to exasperate the cruelty of their conquerors.

The fall of Constantinople, in 1453, and the loss of Trebizond, in 1461, concluded the history of the Empire of the East; since that period, subject to the rule and grasp of Turkish despots, the towns of Asia Minor have lost their trade and commerce, her population has been exhausted, and her fairest and richest plains have been left without care or culture. The authority of the Janissaries, the despotism of the Porte, and the revolts of the local Gover-

nors, have kept up, until within a few years, a system of hostility between the different provinces, while the uncertain tenure of their command, and their jealousy of each other, prevented the chiefs who were well disposed from checking the incursions of the Nomad tribes of Turcomans and Kurds, who had settled in her central plains. These combined causes paralyzed also, for many years, the energies of European travellers. Dangers and difficulties, which could neither be anticipated nor prevented, rendered a great part of the interior of Asia Minor a sealed book to the enquirer; and her many interesting records of antiquity, towns, temples, citadels, and sepulchral monuments, in various stages of decay, were long unknown. During this dark period the avarice and bigotry of the Turks systematically destroyed them, or consigned them to the chisel or the limekiln.

But there is a dawn, however faint, of happier days in the East. The bigotry of the Turk has yielded to a more frequent intercourse with the Christian, and many of the former difficulties are removed by the establishment, for a time at least, of the authority of the Porte throughout the Asiatic provinces from the Euxine to the shores of Caramania, and from the coast of Ionia to the eastern confines of Cappadocia. The effect of this partial improvement is already visible in the crowds of eager and enterprising travellers who direct their steps to the shores of Ionia and Caria, and penetrate into the districts of Phrygia, Lydia, and Galatia; and I trust that the time is not far distant when their combined information may secure to us a correct map and perfect knowledge of every portion of this interesting country.

RESEARCHES

IN

ASIA MINOR,

&c. &c.

CHAPTER I.

Journey through France and Italy—Trieste—Adelsberg—Grottoes of Adelsberg and La Maddalena—Lake of Zirknitz—Idria and its quicksilver mines—Wippach—return to Trieste.

We left England on the 4th of July, 1835, and proceeded through France for the purpose of visiting some of the volcanic districts of that country, in order to have a type with which to compare that part of Asia Minor called the Catacecaumene. The accounts contained in the writings of Strabo, and the notices of modern travellers respecting this region, where volcanic phenomena were supposed to be exhibited in the same manner as in Auvergne, Mont Dor, and the Vivarais, had long excited the attention of English geologists. The latter have been so well described by former writers,* that it would be superfluous to allude to them any further; but I may be permitted to observe that those districts are well deserving the attention of the admirer of picturesque scenery, no less than of the geologist, and are equally interesting on account of the primitive manners of the inhabitants, and for the many historical events with which they are associated.

I pass rapidly over our journey through France and

* Scrope's Central France. Lyell's Principles of Geology, vol. iv., p. 130.

Savoy, the well-known pass of Mont Cenis, and the agreeable impressions which all must feel on descending into the fair plains of Piedmont. We left Turin on the 11th of August, with the view of reaching Ancona on the 18th, in time for the packet to the Ionian Islands; but the cholera, at Marseilles and Nice, had terrified the authorities of the petty states of Italy; and the measures of precaution to which they had recourse were extremely vexatious and provoking. They had placed each other in quarantine, and for a time all intercourse was stopped between them, so that, after several attempts in various directions, we found it impossible to reach Ancona, and were compelled to proceed to Venice, where we hoped to find a vessel to carry us to Corfu.

At Venice we learnt that the packets to the Ionian Islands sailed only from Trieste; so after a few days spent in visiting the remarkable monuments and curiosities, and in regretting the fallen fortunes of the queen of the Adriatic, we proceeded thither by a steamer on the 24th of August. The situation of Trieste when approached by sea is highly picturesque, and the crowded state of the port, and the busy scene upon the quay, announced a thriving trade. Having ascertained that the packet to Corfu would not sail before the 1st of September, we determined to occupy part of the intervening time in visiting the neighbouring grottoes of Adelsberg, and the quicksilver mines of Idria.

Thursday, Aug. 27th.—We started early this morning in a light britschka, drawn by two active Hungarian horses, for Adelsberg. A steep ascent of three or four miles by a fine winding road, which offered many agreeable views of Trieste and the surrounding country, brought us to the summit of an elevated table-land, consisting chiefly of nummulitic limestone. This plain is called the *carso*, the greater part of it consisting of bare rock. In many places we observed curious funnel-shaped depressions, of no very great extent, but considerable depth; some were extensive hollows, resembling in shape and form the craters

of extinct volcanoes. Sometimes several were to be seen extending in a straight line with regular spaces of unbroken ground between them, thereby showing that they must have some subterranean communications. They all appeared to be local subsidences, caused by the falling in of the rock into vast natural hollows or caverns, which probably even now serve as katabothra to carry off the waters of the plain. When we consider the numerous caves which exist all over this country, from St. Servolo to Adelsberg, and the many subterranean rivers, mysterious disappearances, and sudden burstings forth of large streams throughout this district, we shall more readily admit the validity of such a supposition.

Nine miles from Trieste, the country still bleak and barren, we came upon black close-grained fœtid limestone, with rather a flinty or conchoidal fracture, and soon afterwards descended to Prewald, the bold and rocky summit of Mount Nanos bearing N.E. Leaving Prewald, where German alone was spoken, we proceeded through a flat and uninteresting country to Adelsberg, where we immediately procured a guide, and started for the principal grotto, distant about half a mile from the village. As we approached the cave, we had on our left an extensive plain watered by the river Pinha, and a range of limestone mountains close on our right. We were thus surprised to find that the Pinha flowed towards us, and still more so, on approaching the entrance of the grotto, to see it suddenly disappear in a vast cavern fifty feet directly below the spot where we entered, into which it fell with considerable noise and vehemence. It is said to run eight miles under ground, and to reappear again near Planina under another name. After some time spent in lighting and arranging our torches at the entrance, which is secured by an iron gate, we proceeded some hundred yards along a narrow gallery, from which we emerged into a vast gloomy space, where we heard the rushing noise of the river.

This, until sixteen years ago, was the extent to which the grotto was known, but one of the guides then accidentally found an opening in the rock high up on the further side beyond the river. A wooden bridge has since been thrown across, and a road made to the second entrance, by which we ascended, and continued our subterranean journey through the fairy-like halls and galleries and chambers of this marvellous labyrinth. It is impossible to describe all the beauties and wonders of the gigantic stalactitic concretions, and lofty halls supported as it were by Gothic columns, and apparently filled with statues of exquisite delicacy and whiteness. There is, however, one part of the cave which in grandeur and sublimity so far exceeds all the rest, that I must allude to it more specially. It is called Mount Calvary, and is situated near the extremity of the grotto, about a mile and a half from the entrance. Here we suddenly found ourselves in an open space, of which we could neither see the limits, nor distinguish the height of the roof. In the centre the ground rises considerably, forming a steep and rugged hill, over which our path led, the roof rising in proportion as we ascended, with a deep and gloomy looking ravine on either side. This hill, which consists of the blocks and fragments fallen from the lofty roof, was almost everywhere covered with a thick incrustation of white stalagmites, which having assumed every possible variety of form, appeared in the murky gloom like wandering spectres, or beautiful marble statues. At each step as we advanced fresh figures were seen arranged with apparent taste along the terraces of a rising ground. We almost fancied ourselves walking in an enchanted garden, adorned with a rich profusion of statues, columns, and vases, while the darkness made the spacious hall appear still more extensive. In short, our expectations, great as they had been, were not disappointed, and we returned well pleased to Adelsberg, after having been three hours under ground.

This, however, is not the grotto in which the celebrated

Proteus Anguinus has been found.* The habitat of this curious animal is an extensive cave called La Maddalena, three miles from Adelsberg; we were so anxious however to endeavour at least, to obtain one of these animals, or to see its usual abode, that although it was past nine when we came out of the Adelsberg grotto, we determined, after obtaining some refreshments at the inn, to start in the middle of the night to see it. Accordingly, having procured fresh guides, we proceeded on our midnight walk in the rain, through dripping woods and along dirty roads, but were well repaid for our trouble. The Maddalena grotto is not so extensive as the former, but in some respects is much more striking. That of Adelsberg is almost level the whole way, but the Maddalena is one continual descent, at an angle of nearly forty degrees, of great breadth, and supported by a greater number of massive stalactitic columns. The entrance to it is down one of the funnel-shaped hollows to which I have already alluded. At the bottom of the cave we found a slow and sluggish river, which was said to be the same which we had left in the other; but the continued rains had made the water so muddy that our fishing expectations were disappointed. It was an hour after midnight before we returned from the grotto, in which we had found heaps of half-burnt embers, the remains of fires lately kindled there, as we were informed, by robbers, many of whom infest the neighbouring forests, and resort to these caves as places of concealment.

We regretted much not being able to visit the lake of Zirknitz, which we were told was only ten miles from Adelsberg. This remarkable lake is filled with water during six months of the year, from October to March, and contains great quantities of fish, but during the remaining six summer months it is dry and cultivated. At this period there remains nothing but three or four deep, unfathomable pits, katabothra or swallow holes, by which the water returns suddenly, boiling and bubbling up with great vio-

* Agapito. Le Grotte di Trieste.

lence about the beginning of September, when the whole lake, several miles in circumference, is refilled in the course of a few days.*

Friday, Aug. 28.—We started at daybreak for Idria. Near Planina we saw the same river Pinha, but under a new name, emerge from under the rocks at the head of a green and fertile valley, where it bursts forth a full and perfect river, but doomed to disappear again before it finally reaches the river Save. At Loitsch we left the high road which leads to Laybach and Vienna on our right, and proceeded over the mountains to the north-west towards Idria. Had it not been for the rain, we should have greatly enjoyed the magnificent scenery. High mountains and extensive forests, valleys, rivers and plains—everything except a clear sky—were there. A rapid descent by a winding road soon brought us from the summits of the hills into the valley in which Idria was situated on the banks of a small stream, which after flowing north falls into the Mediterranean near Görz.

On reaching Idria, and having shown our temporary passports, and stated the object of our visit, we were waited upon by a smart gentleman with cocked hat and sword, who called himself a policeman, to learn our pleasure as to when we would go round the works, and when we would visit the mines, in order that the necessary dresses might be prepared. We started at once to see the works, leaving the mines until after dark, and were much interested with the whole process carried on in the different workhouses for beating, washing, and smelting. Much native quicksilver is obtained in these various operations before the ore is carried to the smelting-houses: some of it contains seventy per cent. of quicksilver; and when brought from the mine

* I have been since informed that when the lake of Zirknitz is refilled every year, it not only brings back large swarms of fish, but even large flocks of water-fowl, some of which have been found to be albinos. The proteus also is found in many other subterranean localities besides the Maddalena grotto, particularly in several of the funnel-shaped holes, when they contain water in communication with a subterranean river.

is carried to a large building, where it undergoes the following processes:—

1. Washing.—Five or six sets of sieves of different sizes are so placed as to have a stream of water flowing through them. The ore is thrown into the largest, and those lumps which remain in each sieve are turned over to the sorters, who by shaking and turning them about search out the richest specimens, which are known by their weight and colour. These are at once taken to the smelting-house, where they yield from sixty to seventy per cent., while the remainder is removed to the breaking and stamping mills.

2. Extracting native quicksilver.—Some of the ore contains a large proportion of native quicksilver, adhering to the rough and broken edges. This is obtained during the process of washing, but is carried along with the smaller ore by the water, and is deposited with it in long trays in the character of fine mud. These trays are then shaken, when the native quicksilver settling at the bottom is easily separated, and the mud is carried off to the smelting-house.

3. Breaking the ore.—The pieces of ore which in the first operation were taken away to be broken up, before they were burnt, for the purpose of separating the good from the bad, are placed under heavy iron-shod masses of wood, which, being raised by a large water-wheel, are made to fall upon iron blocks, on which the ore is placed. A small stream of water carries off all the broken ore through an iron grating into another apartment, where it is deposited in troughs, and generally yields from twelve to fifteen per cent. This and the small sand or mud from the first washings, after being cleansed of the native quicksilver, is then placed in shallow trays, over which water flows slowly, while the trays are gently shaken, so as to cause all the heavy particles containing metal to settle at once, while the lighter portion is either carried away by the water, or settles at the further end; in either case it is useless; but the heavy parts are removed to the smelting-house.

4. Smelting.—This operation is only carried on during

the six winter months, on account of the injury which the sulphur carried off in the smoke occasions to the cattle, by falling on the meadows where they graze. The government had to pay 9000 guilders one year for damages done to the cattle in the neighbouring fields. The fine dirt and broken ore, described in the former operations as being carried off to the smelting-house, is placed in thin flat earthenware saucers, about a foot in diameter and three inches in depth, which are arranged on three tiers of iron gratings over the furnace. The process is very different from that by which all other metals are obtained, as the quicksilver does not run off from the melted ore, but is carried off in the smoke by sublimation, and afterwards collected in the different chambers, of which there are six on each side of the furnace, forty feet high. As soon as the sulphur has been driven off by the heat, every chimney and opening in the walls is closed while the smelting is going on. The furnace is kept heated until all the saucers are red hot, which generally takes about nine hours. The chambers and smoke are then left to cool for three days, when they are opened, and the walls, chimneys, and floor are carefully scraped to collect the quicksilver which has adhered to them, or run off into the reservoirs prepared for it. In the distant chambers, which have cooled most rapidly, the quicksilver has generally run off. The dust and soot are also shaken and turned over, when much metal runs out from them also, before they are again burnt. On an average each burning produces about eighteen or twenty hundred weight, and there are generally three in a fortnight. Small canals lead from each of the cooling chambers to the general receiving room, where the quicksilver is either contained in large reservoirs, or packed up to be sent to Vienna. Each reservoir contains one hundred and forty hundredweight. The quicksilver is chiefly sent to America or Vienna. For America it is packed in wrought-iron bottles containing half a hundred-weight; while that which is sent to Vienna is packed in sheepskins.

The general appearance of the workmen employed in the

mines was extremely unhealthy; but we were told that none of the works were considered as prejudicial to health except the smelting operations. In the evening, equipped in working dresses, we visited the mines, to which we descended by steps and inclined planes, the shafts being only used for drawing up the ore. The works are carried on upon three different tiers or floors, a space of about twenty klafters or fathoms being left between each, the lowest of which is one hundred and thirty-nine fathoms below the mouth of the shaft. We descended to the second floor only, but the arrangements of the mines seemed excellent, and the works were dry and well ventilated. The miners, or chief workmen who dig out the ore, are paid from twelve to fifteen guilders the square klafter (twenty-four to thirty shillings); the others, of an inferior class, receive from eight to twenty kreuzers per day of eight hours. In some cases the works go on day and night; but this only happens during the winter, when the ore can be smelted.

On the following day we returned to Trieste, crossing a high range of hills which separates the plain of Wippach from the valley of Idria. Near Wippach we stopped to examine, though not so attentively as it deserved, a considerable river which suddenly bursts forth at the foot of the mountain, not from a cavern, but from seven or eight copious springs which gush out under the loose rocks, and visibly increase in size as they flow towards each other. But besides these there must be many others beneath the river, since they form a navigable stream before flowing twenty yards. Nothing is known as to where it comes from, and I might almost add as to whither it goes,—for the people of Wippach say that it again loses itself under the mountains to the westward several miles off; but we had not time to investigate the grounds of their belief. Many rivers in the neighbourhood seem to partake of this remarkable character, agreeing as it does so closely with what we learn of the "fontes Timavi," from Virgil and Strabo.*

* Æn. I. 243; Strab. V. 8.

All these mysterious outbursts and disappearances may have contributed much to the wonders with which the myths of the ancients had invested the neighbouring countries.* From Wippach to St. Veit the road ran due south along a level plain, with Mount Nanos still on our left, and a range of sandstone hills on our right, which we ascended near St. Veit; but we had no means of observing the nature of the country between this place and Trieste, as it was late at night before we reached that city.

* Strabo, V. 8, 9.

CHAPTER II.

Leave Trieste—Adriatic—Corfu—Greek and Albanian costume—Sta. Maura—Cephalonia—Ruins of Krani—Samos—Ithaca—land at Patras.

TUESDAY, Sept. 1.—Having embarked the preceding evening on board the Vigilante, a schooner belonging to the Austrian navy, we got under weigh soon after daybreak, and with a fair breeze stood out of the Gulf of Trieste, enjoying the panoramic view of the snow-clad Alpine ranges to the north, and the hills round Trieste. We found our vessel comfortable, and a fast sailer, and the officers civil. During the day the views of the coast were varied and interesting, and about sunset we had a distant glimpse of the amphitheatre of Pola. The sight of these ruins made us regret not having travelled down the coast as far as Zara or Ragusa, which would also have enabled us to see the remains of Diocletian's villa at Salona near Spalatro. We might have reached Zara on horseback with great ease, from either of which places vessels are constantly passing to Ragusa, and from thence to Corfu. From Zara to Ragusa the journey by land is not safe on account of the Turkish mountaineers, who frequently attack the Dalmatian territories. Not long before a body of six or seven hundred of them had crossed the frontier and committed great excesses.

Wednesday, Sept. 2.—This morning we found ourselves sailing past the bold and rocky coast of Dalmatia, having during the night passed the Quarnero, a narrow gulf or channel, remarkable for the violent winds which are constantly blowing off the coast. The interesting district of Croatia intervenes between the kingdom of Illyria, of which Trieste may be considered as the capital, and the more southern province of Dalmatia. Its constitution is very

peculiar; the whole population is military, and divided into regiments; they have no civil governor or judges, but are entirely under the command of their officers; they pay no taxes, and their only duty is to defend the frontiers against marauding Turks. They enter the regiments as soon as they are able to bear arms, and never leave them during their lives. The emperor can demand their services out of their own country only in the case of a war, and then only for the term of one year.

Towards evening we came in sight of Lissa, the principal rendezvous of the Austrian fleet; during the war it was for some time in the possession of the English. The Austrian marine consists of five or six frigates, eight or ten corvettes or sloops of war, and about twelve brigs and schooners. The seamen are all formed into corps or regiments, and when not employed on board live in barracks and receive regular pay and rations. They are recruited, like the land forces; each province, except Dalmatia, being obliged to send a certain number of men, who serve for eight years, after which they are exempt.

Thursday, Sept. 3.—A fresh breeze from the north drove us rapidly past the Bocche di Kattaro, and under the heights of Montenegro, while the distant coast of Manfredonia was just visible to the westward. The Montenegrini are a bold, savage, and independent people, on the frontiers of Dalmatia and Turkey; they profess the Greek faith, and are governed by their bishop and a Russian prince. They live in a state of perpetual warfare with the Turks, and like their neighbours the Ætolians of old,* always go armed: and this too even when they descend from their rocky fastnesses.

Friday, Sept. 4.—Early in the morning we passed the Turkish squadron cruising off Scutari, in consequence of the insurrection in Albania, which was not yet put down. The wild and rugged coast was visible over the larboard bow, showing but little signs of cultivation, and scarcely a

* Thucyd. I. 5.

trace of verdure. After passing the harbour of La Valona and the point of Linguetta, we sailed under the high mountains of Chamarra or Khimara, "infames scopulos Acroceraunias," a most iron-bound coast indeed, formed by lofty mountains rising precipitously from the water's edge. At three P.M. Corfu appeared in sight, about forty miles ahead, but the breeze died away towards sunset, and we were becalmed before we had reached Sta Catarina. But I never shall forget that sunset, with the fine outline of Corfu on our right, and the bold coast of Albania on our left: nothing could equal the brilliancy and delicacy of the purple tints upon the hills, or the balmy feel of the evening air as it stole over the surface of the water; it was one of those scenes which poets often sing of in a Grecian clime, but which we are too apt to attribute to the imagination of the writer until we have ourselves experienced the reality. After dark, we passed the lighthouse and the Turkish harbour of Bucintro, which, it is pretended, gave its name to the vessel in which the Doge of Venice wedded his Adriatic bride. Within this harbour is the fishing town of Peschiera, where large quantities of the grey mullet are caught, from the roe of which is prepared the well-known Botargo.

Saturday, Sept. 5. — It was daylight before we dropped our anchor in the harbour of Corfu, where after a ceremonious visit from the officer of the Sanitá, and the production of a clean bill of health, we were admitted to pratique, and landed immediately. On reaching the shore, I was much struck with the total change of costume, manner, and appearance of the inhabitants, from what we had left in Italy and Germany. Here, Greeks and Albanians in every variety of dress vied with each other in picturesque appearance. The Greek boatman with his long moustache dropping on each side of his mouth, and the gaudily dressed Albanian strutting about with his belt stuck full of curiously embossed pistols and daggers, told us that we were at length in the Levant; that the great change was

made from the west to the east, from the constrained and artificial habits of civilization to the free and unembarrassed manner of semi-barbarism. Let the traveller extend his wanderings towards the rising sun as far as he please or can, he will find all further changes only gradual and slow, whether he goes to Turkey or to Persia, to the burning sands of India, or to the wall of China. The very countenances of the men were changed, and the great step which we had made became still more apparent, as we walked through the streets to our hotel, and saw the moustached shopkeeper sitting cross-legged at his window. We were also struck by another peculiarity in the manners of the people, viz., the almost total absence of females, whereas in Europe all the peculiarity of costume is usually confined to women's dress.

We spent three weeks in Corfu, during which time we made numerous excursions to different parts of the island, examining its geological structure, or enjoying its beautiful scenery. Our stay, however, was prolonged beyond what we had originally intended, in consequence of an attack of fever which seized my companion, and prevented his accompanying me on a short visit which I made to the island of Paxo. The geology of this island was extremely simple, consisting, as far as I saw, of nummulitic limestone or scaglia, but with considerable variation in the dip and strike of the beds, proving to a certain degree the local violence with which they had been upheaved. The greater part of the island of Corfu belongs to the same formation, but contains a much greater variety in its constituent members. In Corfu, many siliceous beds occur in the limestone, a difference which also exists in the cretaceous beds of the north of Europe. Other beds are arenaceous, containing large quantities of a small bivalve shell, *Astarte carinata*, which I did not find in the island of Paxo. We also observed in the neighbourhood of Corfu, tertiary formations, consisting of blue clay and fine sand. In the clay we found a few fossils, as Pecten, Echinus, Dentalium, Nucula, Crab,

and small portions of lignite, with impressions of fucoids, and dicotyledonous plants.

The mountain of San Salvador, about twelve miles N.N.W. from Corfu, and between three and four thousand feet above the sea, is the highest point in the island, and forms a striking object from the city. We started early one morning in order to ascend it, and having crossed the bay in a small Greek boat, landed to the eastward of Ipso, where we procured a guide to conduct us to the monastery on the summit. He led us some way by a steep ascent through olive woods, and over a barren rocky country, where the industry of the natives was very apparent, for every spot of level ground, however small, was cultivated. Before reaching the small and half-ruined village of Signies, we passed several deep wells in the valleys, round which the shepherds and goatherds had assembled their flocks to water them. At one of these wells we met several women who, with their long flowing drapery and ample folds of white linen falling over their heads and shoulders, had a very Eastern look. The monastery of San Salvador was no longer tenanted; the last monk was snowed up and perished during a severe winter for want of communication with the neighbouring village. The view from the summit was splendid. To the east we saw far into the interior of Albania, and could distinguish several Turkish villages picturesquely scattered over the hills amidst gardens and groves of trees, each house apparently insulated, besides Bucintro, the lake of Vivari, and many forts and castellated buildings. The coast of Italy was just visible above the horizon to the N.W.; while to the south the whole island of Corfu appeared stretched out at our feet, with Paxo and Sta. Maura in the distance. The mountain consisted of scaglia limestone to the summit, sometimes containing tabular flint or chert, and a few fossils. The general inclination of the beds here as well as in other parts of the island was from W. to E.

The olive-tree in Corfu grows to a height and size which

is rarely, if ever, seen in Italy or Greece, and becomes a fine forest-tree: the effect which it produces in the picturesque scenery of the island is heightened by its contrast with the tall and slender cypress which shoots up far above all other vegetation, and sometimes occurs in great numbers: the appearance of this tree is extremely graceful, and fully justifies the Persian poet in comparing to it the taper waist of his mistress. Oil is one of the staple productions of the island, which is said to export annually to the value of 1,500,000 dollars. Much wine also is made, but not exported. On the other hand, there is neither pasture land nor cattle. All the meat comes from Albania, and the island pays above one million of dollars annually on this account.

I cannot take leave of Corfu, without noticing the general popularity, and mild and equitable government of Sir Howard Douglas. As far as I could judge, the principles on which he founded his measures were based upon a sound judgment, a high tone of morality, and a truly philanthropic feeling for, and wish to promote the prosperity and happiness of the islands, combined with a due regard to the interests and honour of his own country. I will only mention two measures in which his conduct has been deserving of the greatest praise. In the first place, he had endeavoured to disarm the population of the islands without irritating their feelings or their prejudices. The privilege of wearing arms had been injudiciously restored to the inhabitants of the Ionian islands by his immediate predecessor, with the view of encouraging Greek notions and feelings, and under the idea that it was an infringement of their privileges to deprive them of their arms. The consequence was, that murders immediately increased in a most alarming degree, the number of such crimes having been more than doubled within the last two years, the proportion being fifteen to seven. The plan adopted by Sir Howard Douglas was, to disarm the whole population in every district in which a murder was committed, and not

to pardon those who were condemned to death for very atrocious crimes. He had also done away with the practice of granting temporary loans to the producers of corn, currants, and wine. The effect of this proceeding was to enable the proprietors to keep their produce out of the market until prices rose considerably; than which a more ill-advised system could hardly have been imagined: let individuals keep their crops and their goods out of the market as long as they please, and until they can get what they consider a remunerating price; but it is most unwise that the government should directly encourage such a system of monopoly as this.

It still remains a doubtful point where the ancient city of Corcyra was situated, although it probably was not very far removed from the site of the present town. Some remains of no great importance are said to exist in the northern part of the island to the north of San Salvador near the coast; but about two miles to the S.W. of Corfu the remains of what is supposed to have been a small temple have been lately discovered. Several Doric columns were standing when it was first excavated; but from great neglect on the part of the authorities one only remains now *in situ*, the others lie about in rude disorder. Their proportions are small, and no other part of the building, which was situated on the slope of the hill, was discovered, except a solid wall, part of which is still standing, apparently built round the levelled space to prevent the surrounding ground from falling in and overwhelming it.

The population of the island of Corfu is estimated at 58,000, while that of the whole republic of the Sette Isole does not exceed 150,000. The revenue of the state is said to average about 150,000*l.* per annum, the expenditure being rather more, and the excess being made good by extraordinary receipts, from sources which will not continue; but whence these were derived I did not learn. The mass of the population is Greek, and, like the rest of their countrymen, has the reputation of being extremely lazy. Nature produces

all they want without any effort of their own. They have wine and oil and corn in abundance, and have therefore little more inducement to work than the free negroes in the West Indies.

Saturday, Sept. 26.—We at length bade adieu to Corfu, and started this morning for Sta. Maura, in the Ionian steamer. The weather was delightful, and the voyage along the coast of Epirus most interesting, as we passed before well-known places remarkable for important events in history. Amongst these was the island of Sybota, opposite Capo Bianco, where the great battle was fought between the fleets of the Corcyreans and Corinthians at the commencement of the Peloponnesian war: Another rocky island off the harbour of Paxo is said to be the spot where Antony and Cleopatra reposed on the day before the battle of Actium. On the main land we saw the rocky site of Parga, and the stronghold of the bold and reckless Suliotes overhanging the waters of the Acheron. Further to the south we passed the extensive ruins of Nicopolis on the northern shore of the Gulf of Prevesa. This city, founded by Augustus in commemoration of his victory at Actium, had been lately plundered of its last honours by Ali Pacha of Yannina, who carried off the materials to build the castle of Prevesa. It appears to have been unwise, in settling the boundaries of Greece, to have left this castle, with the narrow isthmus on which it stands on the southern shore of the gulf, in the hands of the Turks, thus weakening the frontiers of Greece and destroying the natural boundaries marked by the Gulfs of Prevesa and Arta.

On reaching Sta. Maura we landed for a few hours near the castle, and proceeded to the town along the causeway over shallow lagunes, in which we saw several small canoes or monoxylous boats made out of a single tree; and then visited some curious Cyclopian walls on the summit of a ridge of hills about three miles off, which are said to mark the site of the ancient Leucas.* They are not extensive,

* Livy, lib. xxxiii., c. 17.

and are much injured; nor do they belong to the most ancient period, for each stone, although polygonal, has its angles very sharply cut, and all are neatly fitted together, although not in regular courses. In the evening we embarked on board the steamer and proceeded the same night to Cephalonia.

Sunday, Sept. 27.—On landing at Argostoli, the capital of Cephalonia, about five in the morning, we found we had bade adieu to the homely comforts of an inn. We remained for some time loitering upon the beach until our Greek servant Theodore procured us a room where we stowed away our baggage and got some breakfast. The first object which attracted our attention was the wonderful stream or river, which, contrary to the analogy of most other rivers, runs from, instead of into, the sea, and, after flowing a short distance down a rugged channel, disappears under the broken rocks. It is situated at the north point of the tongue of land which forms the west side of the harbour of Argostoli, and is so remarkable in its nature, that the cave into which it finds its way has never yet been filled, or the river shown symptoms of ceasing. A spirited proprietor in the island had opened a great cavity in the rocks for the purpose of tracing its mysterious course; but after having dug to the depth of ten feet he still found the water disappear through the cracks and crevices ten or twelve feet below the surface of the sea, from which it was only separated by a narrow wall of rock. This person afterwards took advantage of the great fall he had thus obtained, and the supply of water-power at hand, to erect a large corn-mill moved by an under-shot wheel, which was constantly kept at work by the great body of water which he was able to let in from the inexhaustible reservoir of the ocean.

Several other streams of the same character occur between this point and the town of Argostoli, one of which attracted our attention by the gurgling noise it made amongst the rocks. It is certainly a most curious phenomenon, and none of the many theories which have been started, inge-

nious as some of them are, appear sufficient to account for all its features. The only mode which occurs to me of explaining its singular character is, by supposing that the stream, after flowing through subterranean channels to a great depth, is at last received in some spacious cavity deep-seated in the bowels of the earth, where it is exposed to great heat, either volcanic, central, or arising from pressure, whereby it is converted into steam, in which state it again escapes to the surface, either as vapour, or in a still more decomposed and gaseous form.

The tertiary formations of Lixuri, consisting of alternating beds of limestone, blue marl, and sandstone, have been already fully described in a joint paper, by Mr. Strickland and myself, read before the Geological Society.* They present a great variety of fossil shells, many of which are peculiar to different beds.

The island of Cephalonia contained in ancient times four Grecian cities, two of which, although hardly mentioned in history, must, to judge from the extent of their walls, have been of great importance. They are described by Thucydides † and Strabo ‡ as forming a Tetrapolis; their names were Palæa, Cranii, Same, and Proni or Pronesos. The ruined walls of Cranii, and Samos or Same, are still extant; of the others we could hear nothing, although Palæa is supposed to have been at Lixuri.§ In order to visit the ruins of Cranii, still called Krani by the Greeks, we crossed a low bridge at the head of the harbour of Argostoli, and proceeded about two miles along the road to Samos; then turning to the right amidst olive-groves and corn-fields, we soon reached the object of our search. Little now remains except a length of wall of Cyclopian structure, presenting two totally distinct characters, several well-preserved square towers of defence, the perfect plan of one of

* Proceedings of the Geological Society, vol. ii. p. 546.

† Lib. ii. c. 30. ‡ Lib. x. c. 2.

§ I have since been informed that the ruins of Proni are visible on a high hill in the southern part of the island.

the ancient gateways, and a small postern gate. The wall extends almost in a straight line as far as the nature of the ground will admit, nearly two miles from north to south along the brow of the hill, the town having been to the westward of it. The northern part is built of polygonal stones, some of which are fitted together with an exactness and sharpness I never saw equalled, as is shown in the accompanying drawings, which represent the exact manner in which the stones are made to fit each other. On the

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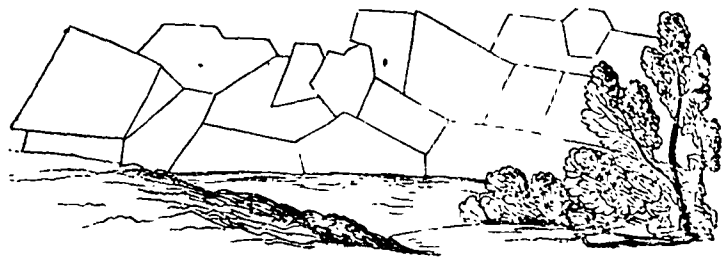

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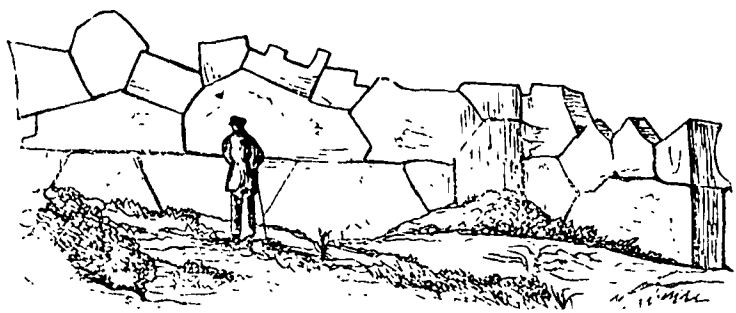


[*Specimens of the Walls of Krani.*]

outside they are worked very flat and even, but inside are left rough and of various thicknesses. In some places we could distinguish a kind of double wall, the inner one being quite rude, and the intermediate space of eight or nine feet filled up with loose stones and rubbish. The southern end of the wall is built in the isodomous style, consisting of perfectly straight courses, of equal thickness.

Thursday, Oct. 1.—We left Argostoli for Same. In our journey across Cephalonia, we observed that the island was not so well cultivated as Corfu. It produces very little oil, but exports large quantities of wine and currants. The cultivation of the latter is proceeding rapidly, every nook and corner where a little soil could be heaped together being appropriated to it.

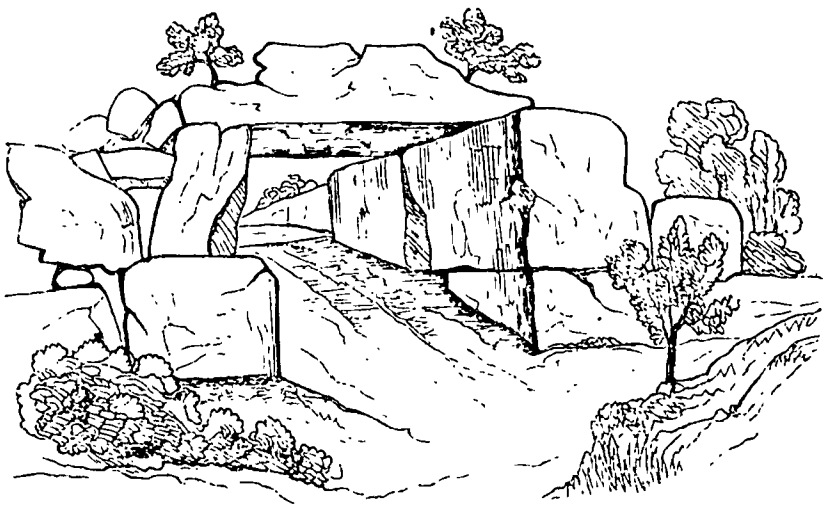
After a ride of several hours, and crossing two successive ridges of hills, we descended into the plain of Same by a beautifully wooded glen. The steep hills on either side were covered with aromatic herbs and shrubs, in all the luxuriance and profusion in which they are found on the shores of the Mediterranean: amongst them I distinguished the ilex, myrtle, several species of arbutus, bay, gum-cistus, and heaths, while the warm air was perfumed with the rich fragrance of the gum-cistus. Nor was the charm of poetical associations wanting: for, as the view opened in front, the rugged outline of Ithaca lay before us, forming an appropriate background to the bay of Same.

The plain is said to be unhealthy, and malaria fevers abound; but we took up our quarters in the village, which still bears the name of Samos, where we found a few straggling huts of fishermen on the beach, and a large barn-like building, which served as custom-house, health-office, and police-station, under the superintendence of the Diputado, by whom we were hospitably received.

Friday, Oct. 2.—We started early to visit the walls of Same. Ascending to the citadel we passed several ancient tombs, which had been lately discovered and opened, and in which some remarkable vases had been discovered. The government, I was surprised to learn, does not allow any excavations to be made by private individuals; and with the exception of a few bad coins, picked up by the peasants, we saw no remains of ancient art. The whole extent of the walls can be traced, with scarcely an interruption, but the style in which they are built varies much; in some places they are polygonal; in others the blocks are

beautifully cut and squared, and laid in straight courses, as symmetrically as in the most refined times of Greek or Roman architecture; in other places the blocks themselves are square, but are not placed in regular courses; and in some parts of the citadel, Roman walls appear to have been raised upon Hellenic foundations, the ground within being strewed with fragments of pottery. I was much struck with the remains of a gateway in the oldest style, of which the top stones remained perfect, as seen in the accompanying drawing. It is evident from these remains that Same

No. 3.



[*Gateway of the Acropolis of Same.*]

was once a place of great importance, a fact which is also established by the statement of Homer, that no less than twenty-four of Penelope's suitors came from hence.

The view from the citadel was truly magnificent, extending as far as Sta. Maura to the north, with Ithaca and the mountains of Acarnania to the east, while a little further south appeared the Gulf of Corinth, and beyond, the blue mountains of the Morea. A grove of luxuriant bay-trees was growing round us; and almost at our feet we could distinctly trace the remains of an ancient port or

semicircular mole under water, where the galleys of Ulysses may have dropped their anchors; for Cephalonia, as well as Ithaca, belonged to Ulysses, as we learn from Homer's catalogue.* This place fell into decay before the time of Strabo, who says that it no longer existed, but that the remains were pointed out in the centre of the bay towards Ithaca.†

From the Acropolis we traced the walls westward to the convent of St. Nicolas, part of which has been built upon its foundation, and whence it ran nearly north towards the sea. Within this space most of the tombs, about six feet in length, have been discovered, generally formed of four flags, two long and two short, and covered over with large slabs of the same stone, while a few appear to have been quarried out of the solid rock. In the lower ground near the sea we came upon several terraces, formed by small portions of Cyclopian walls running in parallel lines one above the other, or intersected by short walls at right angles: They may have been dwelling-houses, if the Acropolis could not contain all the inhabitants, or perhaps they marked the site of the Necropolis without the walls, such as we afterwards observed at the tombs of Cnidos.

On returning to our host the Diputado, and preparing to embark for Ithaca, we were told that we could not leave the island without a permission, which should have been given by the Resident at Argostoli, and we were consequently detained all day, until our messenger returned with the document. The delay was certainly provoking, but it enabled us to examine the ruins with more detail than we had done in the morning. Mr. Strickland also procured a very beautiful specimen of the Argonauta Nautilus, with a cuttle-fish living in it; but on placing it in spirits of wine the animal fell out when dead, proving that it was not attached to the shell by any ligament or muscle, like other mollusca; this want of attachment was

* Hom. Il. B. 631.

† Strab. lib. x. c. 2. *Κατὰ μέσον τὸν πρὸς Ἰθάκην πορθμόν.*

one of the arguments used to prove that the species of Sepia found in the Argonauta was not the real possessor, but an intruder, who had appropriated the empty shell to his own use; an opinion, however, which has since been satisfactorily disproved.*

Saturday, Oct. 3.—We started early for Ithaca, the distance across being about ten miles; but there was no wind, and we did not land at Aito until 10 A.M. Our crew were a noisy, idle set, pulling carelessly, and chattering and eating all the way; and we had great difficulty in satisfying their rapacious demands. From Aito we sent our baggage on to Bathy, while we ascended the steep hill to what is called the Fortress of Ulysses. This commands an extensive and delightful view, and is built upon the highest point of the narrow isthmus, which connects the northern and southern portions of the island. The extensive ruins on the summit were of polygonal masonry of the very earliest period; and besides the walls of the Acropolis, we traced many smaller walls, intersecting each other in various directions, like the apartments of a dwelling-house; but surely Sir W. Gell must have drawn on his imagination when he described so minutely the apartments of this Castle of Ulysses.† Yet it is not at all improbable that here may have been the castle which the author of the Odyssey had in his eye when he sang the return of his hero, the faithfulness of his consort, and the destruction of his enemies. Two long walls may also be traced down the hill towards the east, within which the town was built, and which connected the Acropolis with the sea-shore. Several tombs have also been discovered outside these walls resembling those of Same.

Bathy, the capital of Ithaca, contains about 4000 inhabitants, nearly half the population of the whole island. The town looked neat and picturesque, every house having been recently white-washed by order of the government, since

* Proceedings of the Zoological Society, Part vii. p. 35.

† Gell's Ithaca.

the alarms of the cholera. It is built round the southern end of the harbour, remarkable for its depth of water, and the precipitous character of the rocks, which rise from the water's edge. The depth is said to be fifty fathoms in the narrow entrance, where two ships could scarcely pass; and a small rock rises in the centre of the harbour, which has been conveniently appropriated to the Lazaretto.

During our stay at Bathy we visited the fountain of Arethusa and the rocks of Korax, supposed by some to be the place described by Homer as the spot where Eumæus kept his herds.* At the foot of a steep cliff a fountain rises under the rocks, which flows during the hottest summer, and must therefore always have been a place of consequence in this dry and rocky island. A small stream also falls over the cliff, and trickles down the glen.

Near the entrance of the harbour is the small bay of Dexia, on the right hand as you sail in, where a cave formerly existed close to the sea-shore: this is said to have been destroyed in clearing the ground to make the new road. Gell supposes it to have been the cave of the Nymphs, where the Phæacian sailors landed Ulysses, together with the presents of Alcinous. It should be observed, however, that there is another very near, a little way up the hills, called the O'Hara cave, which was discovered some years ago by an officer of that name.

I was surprised to see so little wood upon the island, for which there is not sufficient depth of soil upon the limestone rocks; but corn is raised in all parts of it. The common vine is also in abundance, as well as that which produces the smaller grape, which when dried is the black currant or *uva passa* of commerce. The whole crop had just been sold, according to the usual custom of the island, to one person, for the sum of 480,000*l.* The price given was 42*s.* per 1000lbs. for the first quality, and 38*s.* for the inferior, which was considered a very fair price. Fish abound in the neighbourhood of the island—particularly the red mullet; and sponges

* Hom. Odyss. Ξ. 5.

are also obtained of very fine quality: I procured one for sixpence which in England would have cost ten shillings. Ithaca, like Cephalonia and Corfu, appeared to consist entirely of white and red scaglia limestone, occasionally interstratified with bands of calcareous marls.

Tuesday, Oct. 6.—We left Ithaca at 10 A.M. in a large caique, which we had engaged to take us to Patras. The weather was sultry, without a breath of wind, and we were not long at sea before we were followed by a shoal of dolphins, whose vivid colours, as they turned over in the water and reflected the rays of the sun, were extremely beautiful. Our captain, like all his countrymen, was a politician, and talked very learnedly upon the state of Greece, and particularly dwelt on its scanty population. The whole of Greece, he said, contained only 700,000 inhabitants, of which there were about 400,000 in the Morea; while the land was rich, and capable of supporting ten millions. From what I afterwards learned, I believe he was right in the main points of his information, though his views of the capabilities of his country were extravagant; it is certainly true that the tyrannical government of the Turks, and the casualties of war, have almost annihilated the population in many places. As the breeze got up we passed between the island of Oxia and the main land, formed by the point of one of the Echinades, but now connected with the shore by the alluvium brought down by the Achelöus. Our sleeping accommodations, as we sailed up the Gulf of Patras, were not the best, having nothing but a bed of pebble ballast to lie down upon in the hold, which swarmed with cockroaches of an enormous size.

Wednesday, Oct. 7.—We awoke to a bright sunrise over the summits of the mountains of Greece, with the castles of the Morea and Lepanto at a distance, beyond which was the double top of Mount Parnassus. Soon after eight we landed at Patras without difficulty, the guardiano whom we had brought from Ithaca preserving a space round us, our luggage, and the boatmen, until the landing was completed,

after which he retired with the captain to the boat, when a crowd of hungry porters rushed upon our goods like harpies, and carried them off to the Locanda. We felt that we were now in Greece, the die was really cast, and we could not return to the civilization of Europe without undergoing the ordeal of quarantine.

The town of Patras was entirely destroyed during the war; and the neighbouring plains, which produced much *uva passa*, were completely devastated; but the town was now rapidly recovering. Long lines of streets were marked out, crossing each other at right angles, and many a well-filled shop offered its wares for sale. Yet good houses were scarce, and there were many hovels built of mud, or of bricks baked in the sun. The town is commanded by a castle, erected by the Venetians upon the ruins of some Roman buildings, in which the Turks were besieged for several years. Near it is a small Venetian church, which had been converted into a mosque, and subsequently by the Greeks into a block-house. A cross fire was kept up from these two places for a long time, and the church is still in ruins. The view from the terrace of the English consul's house, overlooking the town, the sea, and the mountains of Acarnania and Albania, was very beautiful. On the sea-shore is the church of St. Andreas, said to be built upon the site of a temple of Ceres, remarkable for a well of fresh water close to the sea. This well appears to be in the same state as when described by Pausanias.* The heat was still excessive for the time of year; in our room, with all the shutters closed, the thermometer stood at 81° Fahr. at half-past 1 P.M.

Later in the day we visited the remains of a handsome Roman aqueduct, raised on two rows of arches in the hills, by which water was conveyed along a distance of four miles. Other Roman ruins were pointed out to us in the more immediate neighbourhood of the town, but in such a dilapidated

* Ach. lib. vii. c. 21.

state that it was impossible even to guess at their destination.

We had scarcely been six hours on the soil of Greece before we were overwhelmed with accounts of the unpopularity of the Bavarians. At Athens these reports were fully confirmed. To-day we heard of two officers of engineers having been cruelly murdered on the opposite side of the gulf a few days before—the one at Missolonghi, the other in the mountains near Lepanto by the Klephts; the latter had been sent to mark out the plan for a new village, and no sooner were the inhabitants aware that he was a Bavarian, than he was attacked and cut to pieces in a most barbarous manner. Recriminations and complaints were loud on all sides and against every one; the people were accused of republicanism and discontent, and the government of taxation, oppression, and partiality.

CHAPTER III.

Leave Patras—Vostitza—Avgo—Corinth—Kalamaki—Athens—Parthenon—Peiræus—Syra—Arrival at Smyrna.

EARLY on Thursday the 8th of October we commenced our journey along the southern shore of the Gulf of Corinth. The lateness of the season and my friend's health, combined with our anxiety to reach Smyrna, prevented us from making any excursion into the interior of the Morea, or across the gulf, to Delphi or Parnassus. The greater part of the road from Patras to Corinth, particularly the first two days' journey as far as Avgo, is most beautiful. The rich vegetation caused by a constant supply of water forms a delightful foreground to the distant mountains to the north, which present a striking contrast. The hills along the southern shore sloping towards the north are protected from the direct rays of the sun; the ground is therefore less quickly dried up, and vegetation takes a stronger hold than on those sides which slope towards the south, which both in Greece and in Asia Minor we found to be almost universally barren and rocky, and deprived of soil.

It was past seven before the baggage-horses, the only means of conveyance in this country, were all laden; when, leaving Patras, we reached in half an hour a wild and uncultivated tract of land, covered with low shrubs and sloping gently towards the sea, over which we could hardly find the track intended for a road. Another hour brought us opposite the low but strong fortress of the Morea, commanding the entrance to the Gulf of Corinth. The appearance of the little town of Lepanto, the ancient Naupactus, offered a striking illustration of the position of some of the old Grecian cities. The town itself stands on the sea-shore at the foot of a steep hill, on the summit

of which is the citadel or Acropolis, connected with it by two long walls extending from one to the other, and enclosing a considerable space of ground.

We halted for a short time at a small hut about three hours and a half from Patras; beyond which the road, winding over gently undulating hills and promontories, passed through a succession of natural shrubberies, filled with plants, many of which in England would scarcely grow in the open air, flourishing luxuriantly and grouped most happily. The tamarisk, the ilex, and the myrtle, with two species of arbutus, oleanders, plane-trees, and others of rich tints and forms, with elegant and bright-coloured pines, clothed the hills from their summits to the water's edge, filling every valley and adorning every promontory. Occasionally the road, emerging from these wooded spots, ran along the edge of a precipice, commanding the most enchanting and distant views, and then, descending to the beach, compelled us to force our horses through the waves. Nature had here accomplished what art is always aiming at, viz. the combination of picturesque scenery and a vast extent of prospect and water, with the most perfect grouping of the various forms of trees and shrubs. How strange it is that the ancients, with their taste for everything beautiful and perfect in art, seem scarcely to have felt or admired the beauties of Nature! Was it that a want of simplicity in their character and institutions, and a love of mathematical and abstract science, led them to prefer the development of the reasoning powers of the mind to the aspirations of the heart, and the strictly definable rules and proportions which constituted the beauty of a temple or a statue above the vague and indistinct charms of natural scenery? Or was it that, amidst the rich profusion of vegetation with which Nature had clothed her mountains and her valleys, no art was wanted to cultivate what we call the picturesque; and that what was familiar to all gave no peculiar excitement to any one?

We met with no traces of cultivation until within four

miles of Vostitza, when we passed large plantations of cotton and *uva passa*. This place, like Patras, was destroyed during the war, from the effects of which it was but slowly recovering; its principal trade is in currants, for which a few vessels come out from England. We succeeded after some trouble in getting into an empty room in an empty house, where, after converting our portmanteaus into tables and our cloaks into beds, we were established for the night. On the sea-shore below the town we visited a gigantic plane-tree, one of the wonders of the place. The trunk is scathed and rotten, but of enormous size; and out of it, at a height of twenty feet from the ground, a fresh shoot has sprung, which has grown into a full-sized tree.

Friday, Oct. 9.—A few miles from Vostitza cultivation gradually ceased; we only saw occasional patches of reclaimed land surrounded by wild shrubberies, while a range of rugged hills bounded the plain on our right for nearly three hours, when we came to a pass over a rocky promontory, and saw neither rivers nor valleys in the mountains. Wherever streams descend from the hills, they have formed alluvial belts along the shore, varying considerably in width, composed of the débris brought down from the valleys, and separated from each other by long rocky promontories. At twelve we stopped at Acrata, in a plain where a Turkish army of 25,000 men was shut in and destroyed piecemeal by the Greeks: and thence proceeded to Avgo, where we halted for the night.

Saturday, Oct. 10.—We started before sunrise, our road leading for some time along the sea-shore, with a rich plain on our right, covered with cotton and *uva passa*, extending to a range of low hills broken into a succession of table-lands and terraces. The heat became very great as the day advanced, and the air so hazy that the distant views were dim and ill defined. At noon we halted at some houses near the mouth of the Asopus, from whence I rode across the plain to visit the remains of the ancient Sicyon, near the modern village of Basilico. The fine country through

which we had travelled from Patras was the ancient Achaia, celebrated for the league of its twelve cities, to which Sicyon, with whose fortunes the history of the liberties and civilization of Greece may be said to have terminated as well as commenced, joined itself in the year 251 B. C. The ruins are scattered over a considerable extent of ground, and long lines of foundations may be traced, while fragments of fluted columns mark the sites of former edifices. The remains of a brick building, the walls of which are still twenty or thirty feet high, and which was probably a basilica or gymnasium, are the most conspicuous, but the most interesting are the old Hellenic walls, on a projecting promontory of the table-land between the village and the river Asopus. This was evidently the Acropolis, the walls of which were of two characters, the most ancient being of rough construction, the stones laid in straight courses, but very rudely cut and uneven.

Descending from the Acropolis of Sicyon I passed the Asopus below a pointed bridge of one arch, and crossed the plain to Corinth. Notwithstanding the richness of the soil, it is neglected for many miles; the fields produce nothing but thistles of gigantic size; and the oleander, called daphne by the Greeks, flourishes luxuriantly along the banks of all the streams. After passing through an extensive olive-wood, perhaps the remains of a sacred grove, I reached what once was Corinth. It was, indeed, difficult to believe that the motley mass of ruined and deserted buildings, chiefly modern, amongst which were seen the roofs of a few new houses, marked the site of the once crowded and luxurious Corinth. There was nothing to recall the recollection of former days but the bold craggy summit of the Acropolis or Acrocorinth, and the seven Doric columns which have survived the physical and political convulsions of the last two thousand years. No traces remain of the "Bimaris Corinthi mœnia," and we look in vain for—

τὰν ὀλβίαν Κόρινθον, Ἰσθμίου
πρόθυρον Ποτειδᾶνος, ἀγλαόκουρον.*

* Pind. Ol. 13.

Sunday, Oct. 11.—We remained this day at Corinth, and wandered over the ruins of the modern town, which was burnt by the Greeks when they retired, that it might not afford shelter to the Turkish army. The numerous marble fragments which cover the site of the Pacha's palace prove the rich materials of which it had been constructed. The amphitheatre excavated in the rock, on the top of the low hills to the N.E. of the town, is a curious instance of very early architecture; the steps and seats which remain are also cut out of the rock, but the building was probably carried to a greater height on masonry, which has since been removed by successive conquerors.

In the afternoon we ascended the Acropolis, the height of which the French Commission have calculated at 330 toises above the sea. The fortifications appeared to be chiefly Venetian, and were now garrisoned by a small detachment of Bavarian soldiers, one of whose officers, an old Greek Klepht, who had entered the Bavarian service, conducted us over the ramparts.

Monday, Oct. 12.—On the road to Kalamaki, and near the highest part of the isthmus, we passed through the remains of an extensive Turkish farm destroyed during the war; and two hours from Corinth we came upon the remains of the old Venetian walls across the isthmus, the position of which in a military point of view must have been much strengthened by the ravines into which the road afterwards descended, and which are erroneously described as the remains of the canal attempted to be cut through the isthmus in former days. Another half-hour brought us to Kalamaki, in the bay of Schœnus, at the N.W. end of the Saronic Gulf; at the head of which is a small but beautifully situated plain, now overgrown with shrubs and tangled brushwood, and surrounded by wooded hills. It is said to be the spot where the Isthmian games were celebrated.

Near the small landing-place of Kalamaki the low hills to the left consisted of beds of sand, associated with con-

glomerates of pebbles and red marl, imbedded in the sand. In one ravine I found a bed of calcareous marl, five or six feet thick, full of small shells and corallines, dipping like the rest S.E. at an angle of 15°.

Leaving the rocky road along the shore by Megara and Eleusis, we embarked in a zernike for Athens. The vessel was roomy and comfortable, and sailed closer to the wind than any boat I had ever seen. The captain was intelligent, but a great talker, had commanded one of the forts of Napoli during the war, and, as soon as he heard my name, launched forth in praise of the gallant commander of the "Cambrian," whose memory still commands esteem and respect all over Greece and the Archipelago. Yet this man was not satisfied with the condition of his country; he grumbled at everything in the shape of a tax, and thought he paid too dearly for its tranquillity and peace, and the safety of individual property, by being taxed one drachme, equal to sevenpence, each time his boat ran into the Peiræus.

Tuesday, Oct. 13.—Having passed close under the island of Ægina during the night, we were off Salamis at day-break; and after beholding the scene of the first recorded triumph of the "wooden walls" of a free nation, we entered the harbour of the Peiræus soon after seven. One of the marble piers which formed the entrance of the harbour, and on which the lion now in front of the arsenal of Venice is said to have stood, still rises, although in ruins, above the water; the other may be distinctly seen beneath the surface. From the Peiræus we walked to Athens by a long and dusty road, on which a few traces of the long walls were still visible near the harbour; but in the present rage for improvements these are fast disappearing, every one taking what he pleases for his own use.

At length, after passing through the grove of sacred olives, a sudden turn in the road and a break in the hills brought the Acropolis and the Parthenon before our eyes. We had already caught a distant glimpse of them from the

Peiræus, but they were now near enough to be distinctly traced. The temple of Theseus was also there in almost uninjured beauty; it is the best preserved of all the remaining edifices of antiquity, and has a simplicity and dignity of character only to be found in the pure Doric style of architecture. In striking contrast with these stern remains were the many-coloured gaudy-looking houses and villas, with pink walls and green Venetian blinds, which rose above the mud and dirt of the town. Next to the great mistake of fixing upon Athens as the site of the capital of the modern kingdom of Greece, this has been the most unpardonable: viz. allowing new houses to be built upon the ruins and débris of the former city, where the neglect of centuries had accumulated a mass of rubbish sixteen or eighteen feet thick, over the pavement of ancient Athens. This, wherever removed, has always been found to conceal archæological treasures of the highest interest; and an inexhaustible mine of antiquarian wealth must still be there. This is now lost, perhaps, for ever; centuries may elapse before another opportunity occurs of exploring this site with the same advantages.

The interior of the temple of Theseus has in the mean time been converted, by order of the government, into a temporary museum, in which are preserved all antiquities found in the ruins and foundations of buildings about Athens, which are declared to be the property of the state, their exportation being prohibited. The larger articles, as sarcophagi, marble chairs, and statues, which cannot be carried off, are arranged under the external portico. A wanton act of barbarism was here committed by Chosrew Pacha during the last year of Turkish rule, which is a satisfactory answer to the angry attacks against Lord Elgin for removing to England so many master-pieces of Greek sculpture, now secured from further ravages within the walls of the British Museum. The Pacha had been informed that there was a hive of honey in the N.E. corner of the pediment, whereupon he ordered his people to obtain it

for him; but on being told that it was so buried amongst the stones, that it could not be got at, he ordered the whole corner or end of the pediment to be thrown down, to enable him to gratify his wishes.

In the excavations which have been made for rebuilding the town, near the remains of the temple of Ceres, to the east of that of Theseus, several remarkable statues and pedestals have lately been discovered. There are three of the latter *in situ*, on two of which statues are still standing, and which appear to have been placed on each side of the road leading from the temple. The nearest pedestal has lost its statue; but on it is carved an olive-tree, with a serpent twined round it, which is generally considered as the symbol of a hero. The same bas-relief occurs on the furthest pedestal, which supports a well executed statue, terminating from the knees downwards in the figure of a serpent. This is supposed by Signor Petaki to represent Erichthonius, the fourth king of Athens. The head and greater part of the arms are broken off, but the hero seems to have been in the act of throwing a spear, against which, the second figure on the pedestal, which is placed nearly half-way between the other two, but on the opposite side of the road, appears to have been defending himself. Signor Petaki considers that it represents the contest between Erichthonius and Phorbas, king of Eubœa, and that they belonged to the heroic statues described by Dicæarchus, as standing near the portico of the Pœcile, which is close by towards the east.

Beyond the Pœcile is an ancient gateway, commonly called the Gate of the Agora. The discovery of an inscription upon it, hitherto overlooked, shows that it was the portico of a temple dedicated to ΑΘΗΝΗ ΑΡΧΑΙΕΤΗΣ. A long inscription on a high marble slab within this portico, which has been called a tariff, has turned out, on being decyphered, to be an edict, offering to public competition the management of the property of a certain Hipparchus, which had been confiscated. I also heard that

many of the columns of the Stoa of Hadrian, in the centre of the town, had been lately brought to light *in situ;* but the modern Goths, whose administration in Greece is open to much criticism, have erected new barracks over one end of the foundations, and have left one of the columns buried under ground.

The general unpopularity of the Bavarians was owing to several causes; but the principal one seemed to be their draining the already impoverished country of every drachme they could send to their families at home. It may be said that such a proceeding was natural on their part; but there must have been great faults in a system which could sanction such a state of things. The drachmes of the diminished revenue of Greece should never have found their way into Bavaria. It proved that the admiration which these Germans professed to feel for the Greeks had yielded to their own self-love, and also established the truth of another accusation brought against them, viz. that they considered Greece as a province of Bavaria, and, by means of the armed force which they had in the country, as a conquered province. This was most unjustifiable, but the arbitrary conduct of these Bavarian officers towards the Greeks, and of which I heard of many instances, was still more tyrannical and oppressive. I was astonished that the Greeks submitted to it so quietly; but my Kalamaki boatman had said that his countrymen were formerly slaves of the Turks, and now of the Bavarians; and added that they would always remain so, as long as they did not show more religious feeling and respect than they now did. Certainly they have so long been accustomed to oppression, that this is not surprising. They accommodate themselves with wonderful facility to any change of circumstances or of condition; they talk with the greatest indifference of having formerly lived in higher ranks or grades in society, or they maintain that they might have done so, if such and such events had happened; while all the time they are in a menial capacity. The boatman from Kalamaki was an instance of this, as well as one of our

muleteers from Patras, who had been a capitano during the war. Perhaps, after all, this may be nothing but vainglorious boasting, and the result of a wish to give a higher notion of their importance than present appearances would justify.

But the Acropolis and its ruins are the glory of Athens; and I was much struck with the contrast between grandeur and destruction which it presented. Notwithstanding its desolate appearance, we seem, while standing amidst the ruins of the Parthenon, to live again amidst the glories of ancient Greece; the effects of patriotism and æsthetic refinement appear embodied before our eyes, and recollections of the policy of Pericles, the influence of Aspasia, and the eloquence of Demosthenes, rush upon our minds. Nor could I help admiring the high finish which the ancients bestowed even on the most minute details, amongst which, few things in the architecture of the Parthenon are more striking than the polish given to the surfaces of the joints of the columns, which, although never intended to be seen, were as highly finished as the most elaborately worked ornament or figure. This was probably necessary, in order to ensure an equal pressure on all points of the stone, that the enormous weight above might not cause the edges to exfoliate; an accident to which ancient buildings were particularly exposed, in consequence of the stones not being bedded on cement. The Erectheum is well known as a most perfect specimen of Ionic architecture, but had suffered much during the late wars, particularly the beautiful portico dedicated to Erectheus and Neptune, which was previously uninjured. More than half of it is now destroyed, in consequence of the heavy fire directed against it by Chosrew Pacha, in order to destroy a powder magazine which he understood was under it.

Amongst the more important discoveries lately made on the Acropolis, are the foundations of the little temple of the unwinged Victory. It stood on a platform in front of the southern wing of the Propylæum, and on the right hand as you enter by the great central staircase. The temple was

tetrastyle, having four columns in front, and four behind; all of which have been discovered in the accumulation of ruins round it, together with their bases and plinths, some of which were still *in situ;* the frieze has also been found in the same neighbourhood, with the exception of four pieces which had already been removed to England. By order of the government, workmen were busily employed in restoring the building and clearing the foundations; but whatever may have been its intrinsic merits, it must have materially injured the symmetry of the Acropolis and the Propylæa, inasmuch as the left or southern wing is thrown further back than that to the north, which according to Pausanias was the picture-gallery. From this circumstance, I am inclined to think that the temple of Victory, although Ionic, was more ancient than the Propylæa, the left wing of which appears to have been purposely placed so as not to interfere with some sacred edifice already in possession of this spot.

Another discovery of great interest had been lately made at the S.E. corner of the Parthenon. In removing the materials which had accumulated round its rustic base, a bed of marble chippings and fragments was found, seven feet thick, beneath which was a mass of ashes and charred wood, one foot in thickness, mixed up with numerous fragments of pottery, under which again were said to have been found the remains of a building or temple in terra cotta, but which I did not see. The marble chippings were no doubt derived from the preparing and cutting the stone for the Parthenon, and the charred wood and ashes bore witness to the existence and destruction of some earlier structure, perhaps the Parthenon burnt by the Persians. In the ancient walls which still surround the Acropolis towards the town, the fragments of numerous columns were introduced, for the purpose, as it is said, of recalling to the recollection of the Athenians the indignities they had suffered on that occasion.

My excursions about Athens were suddenly stopped, three days after my arrival, by a violent attack of fever,

which had been extremely prevalent all the autumn. Scarcely an individual of any foreign nation had escaped, and the Bavarians had lost many men. The neighbourhood of Athens has been supposed to have become more unhealthy of late than it formerly was, and theories and speculations have not been wanting to account for this change. It has been attributed both to the draining and to the want of draining of the low lands near the Cephisus; want of cultivation, and want of wood on the neighbouring hills, have also been brought forward as causes; but on this subject we are still very much in the dark. The works of Hippocrates prove that the health of the Greeks was very much affected by the air, water, and aspect of the localities in which they resided; and Aulus Gellius* tells us that, whilst residing at the villa of Herodes, in the neighbourhood of Athens, at Cephisia, the very spot which is now considered the most unhealthy, he was seized with a violent attack of fever, and that his physician related to Calvisius Taurus at what times and with what intervals the fever came and went, "quibus modulis quibusque intervallis accederet febris decederetque;" and in another place he mentions Plato as having alluded to fevers and quartan agues.† Much, however, of the natural malaria of parts of Attica would necessarily have been counteracted by more active cultivation, an improved system of supplying water, and attention to wells, &c.; and perhaps the ancient style of dress may have been more suitable to the climate.

In about ten days I was again able to get out, when I found a great difference in the surrounding scenery. The rainy season had set in, and the hills and plains had assumed a greener hue; and as a steamer had arrived from Smyrna, we moved our quarters on the 28th of October to the Peiræus, in order to spend a day or two there before embarking for the shores of Ionia.

Many remarkable remains are still to be seen near the ancient harbour, such as the walls of the arsenal, with

* Noct. Att., lib. xviii, c. 10. † Ib. lib. xvii. c. 12.

gateways and towers of defence, besides the ruins of an extensive mole.* Crossing over to the south, we traced the ancient sea-walls round the promontory as far as the harbour of Munychium. Nor did we fail to visit the fallen column on the beach near the point, nine massive fragments of which now strew the ground near the tomb, which has been dignified with the name of Themistocles.

Thursday, Oct. 29.—The steamer not sailing this morning, we continued our explorations over the Peiræan promontory, as far as the harbour of Phalerus, near which we saw many more remains of ancient walls and buildings. Indeed, the whole promontory is covered with blocks of hewn stones and foundations marking the site of an extensive city. One building particularly attracted our attention; it consisted of numerous columns or pilasters placed endwise in the ground, and arranged in a quadrangular form, apparently marking the site of a market-place or agora. In the evening we returned on board the Levant, and left the Peiræus soon after sunset.

Friday, Oct. 30.—After a stormy and tempestuous night we reached Syra early in the morning. Situated in the centre of the Archipelago, half-way between Europe and Asia, Syra became the resort of trade and commerce during the troubled period of the war; and owing to a fortunate combination of circumstances, all parties met here as upon neutral ground, and gave that encouragement to its trade which called the new town into existence.

Before the breaking out of the Greek revolution there existed only the old town, picturesquely situated on a steep and conical hill nearly two miles from the shore. It was entirely inhabited by Roman Catholics, and its population

* It was here that a party of workmen employed on the foundation of a new magazine came upon those very remarkable slabs of marble, on which were inscribed the details of the Athenian fleets, handed down from one superintendent of the dock-yard to another, between the last year of the 101st Olympiad, and the third year of the 114th, or between the years 360 and 324 B.C. All these inscriptions have since been published by the learned Professor Boeckh of Berlin, in a Supplement to his Political Œconomy of Athens.

amounted to about 4000, some of whom found occasional employment at Constantinople as servants and porters. During the war the island was taken under the protection of the French government, and the Capitan Pacha, hardly looking upon it as a Greek island, never attempted to molest it. Thus, it soon became a place of refuge to the Greeks who were driven away from other islands, and particularly to the Sciotes, many of whom now reside there, and by whom the lower town was chiefly built and inhabited.

The trade which the island carries on with England is very considerable. About fifty vessels from English ports touch at Syra annually, chiefly however bound to Smyrna and Constantinople, and bring out for this place cargoes which vary in amount from 8000*l.* to 500*l.*; about sixty vessels from the Ionian islands also arrive here during the same period. The average amount of British goods annually imported into Syra is estimated at about 200,000*l.*, which are then re-exported to different parts of Greece. The revenue derived from the customs payable at Syra forms a material portion of the general income of the whole Greek kingdom. It amounts on an average to about 20,000 colonnati, or Spanish dollars, per month (between 4000*l.* and 5000*l.*), or 55,000*l.* per annum, which is raised by an *ad valorem* duty of 10 per cent. charged on all imported goods, with the exception of a few which are charged by weight. The harbour-dues are extremely light, not exceeding one or two pence per ton.

It was difficult to obtain exact returns respecting the population of the different islands of the Cyclades: Syra was said to contain 22,000 inhabitants, while the whole population of the islands was supposed to be 115,000; but no census had been made by the government for some time. An iron-mine was reported to have been discovered near the town; but, from the specimen of ore which I saw, I doubt its being rich enough to be worked with profit, particularly when we consider the total want of fuel here and in the neighbouring

isles. Syra has no exports whatever. Naxos and Andros produce large quantities of oil, and Tinos produces silk, but not much.

The shortsighted policy of the Greek government towards Syra is much to be regretted, although they plead the absolute necessity of the measure; yet, it is killing the goose for the sake of the golden egg. All the receipts of the revenue are withdrawn from the island to the seat of government, no portion being left to defray the local expenses; even the municipal revenues, which were untouched by the Turks, come within the iron grasp of the present system. A short time ago the magistrates were obliged to subscribe amongst themselves to pave the streets, and yet the people appeared contented, and we heard of no complaints.*

Saturday, Oct. 31.—After another stormy night we entered the Gulf of Smyrna, at 6 A.M., passing under the bold bluff headland of Cape Karabournou (or Black Nose). As we advanced we were much struck with the beauty of the mountain scenery on the southern shore. Steep and wooded hills rise abruptly from the sea, covered with evergreens and wild pear-trees; the latter, when in bloom, as I afterwards saw them in the spring, giving a gay appearance to the mountain-side. Higher up the gulf the mountain-range attains an elevation of nearly 3000 feet in two remarkable hills, which have received the appellation of the Two Brothers, and form a conspicuous object from Smyrna, where their clear or clouded appearance is looked upon as a certain prognostic of fine or foul weather. Four miles below Smyrna we passed the Sanjiac Kaléh, or Castle of the Standard, corrupted by the French into St. Jaques: there the entrance to the bay of Smyrna is extremely narrow, being pent up between a low spit of land to the south, on the extreme point of which the castle in question has

* For the geology of Syra, see 'Expédition Scientif. de la Morée,' tom. ii. part ii. p. 65. Paris, 1833.

been built, and the extensive shoals to the north formed by the mud brought down by the Hermus.* At the fort are some guns of very large calibre, mounted *à fleur d'eau*, and carrying stone shot of 170 lbs. weight. The rain fell in torrents as we reached Smyrna, and, dropping our anchor, landed on the Marina, under the flag-staff of the British consul. We forthwith proceeded through narrow streets and dirty passages to the well-known lodging-house of Madame Marracini, where we were lodged and boarded for the moderate sum of a dollar and a half each per day.

* Dr. Chandler, in his 'Travels in Asia Minor,' vol. i. p. 88, has entered into a long disquisition as to whether the effect of this accumulated mud will not be to block up and render useless the port of Smyrna, which he thinks certain.

CHAPTER IV.

Smyrna and its Environs—Old Smyrna—Sipylus—The Ancient Meles—Mount Pagus—Karaghieul—The Cave of Homer—The Roman Aqueduct—The Theatre—Bazaars of Smyrna—Fouges, anc. Phocæa—Reach Constantinople.

I HAD not been three days at Smyrna before I was again attacked by fever, which soon became regularly intermittent; and I began to doubt whether I should be able to enter upon my investigation of the interior of Asia Minor. In the mean time, the period for travelling in the interior was passed, that is, the weather was wet and cold, the rivers swollen, and the season ill suited for the bad accommodation to which we should be exposed.

During the months of November and December I accompanied Mr. Strickland on several geological excursions in the neighbourhood, the results of which he has already made public.*. The environs of Smyrna are highly picturesque and well cultivated, and afforded numerous opportunities for excursions on horseback, either to the villages of Bournoubat, Budjáh, or Seidi Kieui, or along the plain to the beautiful pomegranate-groves of Hadjilar, to Bounarbashi, or to Ishekli.

Amongst the many objects of antiquarian interest in the immediate neighbourhood of Smyrna, the Cyclopian remains on the hills at the N.E. extremity of the bay deserve the principal notice. Taking advantage of a fine day in the beginning of December, we crossed the bay in a small Greek boat, and landed near the mouth of a stream, which descends between steep trachytic hills to the east of Cordelio. For some distance we ascended its picturesque bed, between rugged hills, covered with myrtles and olean-

* Transactions of the Geological Society, vol. v. p. 393.

ders. The western side of the valley is formed by an elevated and rather narrow table-land, stretching down towards the sea with a gentle slope and spreading out at its lower end into an extensive plateau. It consists of a white trachytic tuff, having the appearance of a lava *coulée;* its sides are steep, but clothed with verdure and underwood, except at the N. E. extremity, where it terminates in an abrupt escarpment. After proceeding about two miles up this ravine, we ascended the hills to the east; and on reaching the summit found the remains of old Cyclopian walls, marking the Acropolis of an ancient city, of which history has not recorded the name. It is evidently of the same age as the tombs near Bournoubat, one of which has been designated as that of Tantalus. These have been described or alluded to by Pococke and Chandler in their 'Travels in Asia Minor;' and Arundel, in his 'Account of the Seven Churches,' speaks of them as the supposed town and tomb of Tantalus.*

The accompanying woodcut will show the remains of what appears to have been the principal gate of the Acropolis, which is now almost blocked up with the fallen fragments.

No. 4.

[*Gateway of Ancient Smyrna.*]

* Arundel, 'Seven Churches,' p. 299.

The top of the gateway is formed of one block, upwards of eight feet long; and the whole is built of the same red trachyte of which the neighbouring hills consist, and to which Chandler has given the name of brown bastard granite.*

The wall of the Acropolis is not circular like those of the tombs and tumuli below, but it presents numerous salient and re-entering angles: hence we descended a steep path over the rocks, and after crossing a plain, strewed with a chaotic mass of rocky fragments, reached the abovementioned tombs. A small pool of water, said to be dry in summer, stood on the plain above them; near which walls of various characters and origin were visible, extending in every direction. The only feature which has been omitted by Chandler in his description of these tumuli is the form of the roof of the vaults which were found in the centre of the mounds. A circular wall, varying originally from ten to twenty feet in height, but now generally in ruins, surrounded each tomb, to support the loose materials of which they were composed. These walls were for the most part Cyclopian, although sometimes approaching closely to the isodomous style. One of these vaults had been recently opened and examined by M. Texier, with the assistance of a boat's crew furnished by the French admiral, who, with a line-of-battle ship, was then wintering at Smyrna. It was ten feet long and four or five wide; the roof was formed by the stones of each upper course overlapping the lower, and being beveled as in the gateway of the Acropolis to produce the form of an arch. The stones begin to overlap each other after the second course from the bottom, which I believe is the same construction as was used in the tomb of Agamemnon, near Mycenæ. Besides other smaller tumuli, not so well constructed as the above, we also saw evident traces of steps cut in the rock in several places, so that there can be no doubt that they mark the site of an ancient city: but what was its name? M. Texier, who spent some time in making a survey of the remains, has designated

* Chandler, 'Asia Minor,' vol. i. p. 81.

them as the ruins of Sipylus, a town of Lydia, and the abode of Tantalus and Pelops; he supposes the small walls in the neighbourhood to be the remains of houses, and the pool of water the lake or λίμνη, or "stagnum," which, according to ancient authors,* covered the ground where Sipylus once stood. I cannot agree with him as to this name, for in the first place, the lake or pool to which he alludes is far too insignificant to have attracted the attention of ancient writers; and, moreover, is in the plain *above* the town and ruined tombs; and when I saw it in the rainy season, was not above thirty feet in diameter. The extent also which he gives to the walls is too great; and I believe that the greater part of those near the tombs, and along the hill side towards Bournoubat, are modern. They are very low and loosely put together, and appear to have been heaped up either by shepherds to pen their flocks, or by labourers in clearing the ground for cultivation, and in forming terraces to keep up the soil. They are rude and irregular in their form, and generally occur where the ground is most level, under the lee of a projecting rock or cliff. They are to be met with, also, over the surrounding hills. On a second visit I particularly examined one mass of walls of this description, rather higher and more extensive than the rest, to which M. Texier had assigned the name of *Maison des Pélopides*, and saw nothing to alter the opinion I had already formed.

Yet there can be no doubt that an ancient city once occupied this ground, from the circumstance of an Acropolis existing on the summit of the hill, although for the following reasons I cannot agree to the name given it by M. Texier. Strabo,† in alluding to the destruction of Sipylus by an earthquake, and remarking that Magnesia was also overturned by a similar catastrophe, adds that the latter town was situated under Mount Sipylus; whilst Pausanias‡ affirms that the ruins of the town could for

* Plin. Nat. Hist. v. 31. Pausan. Ach. vii. 24.

† Lib. xii. c. 8, p. 580. ‡ Ach. lib. vii. c. 24.

some time be seen under the waters of the lake, which was called Sale, or Saloe; it is, therefore, probable that the site of the town of Sipylus, if it ever existed, was, as Chandler imagined, in the marshy plain near Magnesia, at the foot of Mount Sipylus,* where the character and appearance of the country agree with the vague accounts of the position of Sipylus which have been handed down to us by ancient writers. Thus we have a mountain of the same name overhanging a considerable extent of marshy ground, which in all probability is the same as the lake to which Pausanias alludes under the name of Sale, or Saloe. The connexion of this locality with the history of Tantalus is further proved by the occurrence of a remarkable statue sculptured upon the rocky base of Mount Sipylus, which was visited at a later period by Mr. Strickland, and is by him supposed to represent the statue of Cybele described by Pausanias.†

* Asia Minor, vol. i. p. 307.

† The following extract from Mr. Strickland's Journal will illustrate the locality in question:—"Mount Sipylus, composed of hard grey cretaceous limestone, rises almost like a wall abruptly from the plain of the Hermus to a vast height. Numerous springs flow from its base, and form a marshy spot, supposed by Chandler to be the Lake Sale, mentioned by Pausanias as the site of the ancient town of Sipylus destroyed by an earthquake. One of these springs near a cafinet is very abundant, and at that early hour * felt warm to the touch, though its temperature is perhaps not higher than the mean for that latitude. Immediately above this spring, in the side of a cliff about 100 feet above the road, is a curious colossal statue, rudely sculptured out of the solid rock. It represents a sitting figure contained in a niche, and the height from the base to the top of the head may be about twenty feet. The features and costume are so much corroded as to be hardly traceable. There can be little doubt that this is the ancient statue of Cybele, mentioned by Pausanias as the work of Broteas, son of Tantalus.† Its form is too regular and artificial to agree with his account of the figure of Niobe.‡ No modern traveller seems to have noticed it except Chishull, who considered it to be the figure of Niobe. Chandler and Emerson both passed within 100 yards of it without seeing it. The former fancied that he saw Niobe in the rude outline of some cliff near Magnesia, but I believe no succeeding traveller has verified his conjecture. Emerson involves the matter in confusion, by connecting Chishull's description of the statue with Chandler's fanciful account of the lights and shadows on the cliff at Magnesia.§ Whether or not the latter be right in his identification of Niobe, it seems pretty clear that the

* 7 A. M. April 14, 1836.

† Pausan. Lacon. c. 22.

‡ Pausan. Attic. c. 21.

§ Letters from the Egean, vol. i. p. 225.

Another argument against the probability of these ruins being those of Sipylus, arises from the circumstance, that Strabo, in his very exact account of the coast of Ionia, and particularly of the bay of Smyrna, never alludes to the fact of this town being near the sea-shore, although he speaks of it by name in several places. It is, however, easier to prove that it could not have been Sipylus, than to fix its real name; unless, what is most probable, it was the ancient Smyrna, built by the Smyrnæans before they were driven, as Strabo relates,* from their habitations by the Lydians, and dwelt in villages for 400 years, until restored to a new city on Mount Pagus, built by Antigonus and Lysimachus. Dwelling in the neighbourhood of, and surrounded by powerful enemies, their first efforts would necessarily be directed towards securing their position by walls and fortifications, and thus their citadel would be built on one of the most lofty and insulated peaks in the neighbourhood.

In the mosque of Bournoubat are several marble columns, evidently derived from older buildings, perhaps those beautiful porticoes and temples which, according to Strabo, once adorned the illustrious city of Smyrna. On one of these is a remarkable Greek inscription, which has been already published by a distinguished English traveller,† celebrating the wonderful healing powers of the river Meles. Now, it is a remarkable circumstance that the river, which is supposed to be the Meles, and falls into the sea near Smyrna, is a dirty, muddy stream; and to judge from the deposit which it leaves in the choked up water-pipes, must be extremely unwholesome; whereas the bright and sparkling river, not much inferior to it in size, which rushes over its rocky bed near Bournoubat, is celebrated for its agreeable and wholesome qualities. Is it

statue above described is not that nymph. The rudeness of the workmanship denotes a remote antiquity; and if it be not the statue of Cybele which Pausanias mentions, we may conjecture that it represents some deity presiding over the spring below, or perhaps some hero whose tomb may be concealed in the rock behind."

* Strab. lib. xiv. c. 1.

† Morier. Appendix, No. 48. Arundel, Asia Minor, vol. ii. p. 406.

then improbable that this should be the real Meles of antiquity?* If so, the ancient Smyrna, which, according to all writers, was on the banks of, or near the Meles, would have been on the north side of the plain; and, as Strabo says the old town was in a bay beyond the city and bay of Smyrna, at the time he wrote, that is to say, more towards the east, at a distance of about twenty stadia, it would fall almost upon the spot where is now the tomb of Tantalus. The words of Strabo are very clear,† and I have little hesitation in pronouncing these ruins to be those of the first Smyrna. After mentioning the hot springs, which are well known, and the gulf of Smyrna and the city, he proceeds to say, "and beyond is another bay, in which is old Smyrna, about twenty stadia from the present one."

According to the last and most accurate surveys, the bay opens again beyond the Windmill point at Smyrna, thereby forming another bay, in the centre of which is the landing-place of Bournoubat, not very far from the ruins in question. The distance from the town of Smyrna in a direct line is very little more than two miles, although following the coast it is nearly four; yet this discrepancy is of little consequence, the real distance by water being so nearly that which has been laid down by Strabo. On the whole, therefore, I think it probable that the Acropolis, and tomb of Tantalus, mark the site of old Smyrna, which existed before the dispersion of its inhabitants by the Lydians; and in fact, unless we believe that the old town, to which Strabo alluded, was built upon the plain, which would be contrary to the practice of the ancients, there is no other spot on which its Acropolis could be built; for Mount Pagus certainly belonged to the modern town, and following round the bay, no other place occurs, until we reach the hill in question, which has the appearance of having been

* Since writing the above, I find the same idea has been already suggested by M. Fauvel.

† Strab. lib. xiv. c. 1. Εἶθ' ἱερὸν Ἀπόλλωνος καὶ θερμὰ ὕδατα. καὶ ὁ Σμυρναίων κόλπος, καὶ ἡ πόλις. Ἐξῆς δὲ ἄλλος κόλπος, ἐν ᾧ ἡ παλαιὰ Σμύρνα, ἀπὸ εἴκοσι σταδίων τῆς νῦν.

an Acropolis, or where any ancient ruins have been discovered. With regard to the Meles, if it was not the river of Bournoubat—(and perhaps there may be some difficulty in reconciling such a notion with the account of its being the boundary of Æolia, old Smyrna having been within that province, and the modern city without)—it is not improbable that the river which flows through the plain of Smyrna from the valley of Kavaklidere, and into which the river of Bournoubat falls, was the real Meles.*

Pausanias † acquaints us that Smyrna was rebuilt, in consequence of a vision which appeared to Alexander on Mount Pagus, after he had conquered Asia Minor; and although the Macedonian king did not live to execute the work, it was completed by his successors, Antigonus and Lysimachus. A full account of the origin of the city, and its subsequent history and appearance, has been collected by Chandler, Arundel, and Cramer; but none of these writers allude to the remains still to be seen on Mount Pagus and the adjoining hill. A ruined castle of the middle ages occupies its summit, enclosing a space of considerable extent; the walls of which are built of loose and crumbling materials, with the exception of a small portion on the southern side, looking towards Seidi Kieui and Paradise. Here are some well-preserved remains of the old Hellenic walls; the stones are squared, and fitted closely together without cement, which is used in large quantities in the more recent parts; the style is pseudisodomous, the different courses of stones not being continuously of the same thickness. There are also remains of a strong and massive wall, extending from the castle to the west, towards the Jews' burial-ground and the ancient harbour, the lower portions of which are also decidedly Hellenic, and probably mark the position of the S.W. wall of the city, extending from the sea-shore to the Acropolis.

The appearance of Mount Pagus, particularly from the east, is very remarkable, resembling in form a truncated

* Arundel, Asia Minor, vol. ii. p. 363. † Ach. c. 5.

volcanic cone, rising to a height of 500 or 600 feet above the sea. It does not, however, consist of scoriæ and ashes, but of compact red porphyritic trachyte, varying occasionally in its colour to grey, and resembling that on the opposite side of the bay. In character it is sometimes fissile, and appears stratified, from the striped or banded nature of the colouring; but this appearance is the effect of bubbling and boiling, when the mass was in a state of incandescence. This nucleus of trachytic rock appears to have been raised by volcanic action from beneath, and to have broken up the superincumbent beds of tertiary limestone while still in a fused or liquid state; for in some places it is seen spreading itself over the slightly inclined beds of limestone and cretaceous marls, by which the nodules of flint imbedded in them have been altered into quartz resinite or opal, the inner portion being dark brown, with a peculiar vitreous lustre, while the outer portion is an opaque white.

Another interesting excursion which the country about Smyrna offers to a stranger, is the beautifully situated lake of Karaghieul, in the mountains above Bournoubat, and nearly half-way between the plain of Smyrna and the valley of the Hermus. Tradition has also invested this lake with a portion of the dignity of the family of Tantalus, and it is usually known as the lake of Tantalus. Ascending the deep valley behind Bournoubat, watered by the bright and sparkling stream above mentioned, we soon reached a mountainous district, slightly covered with low ilex shrubs, and thorns, and with luxuriant plane trees in the valleys. We passed numerous Euruque encampments amongst the hills, and saw a few caverns hewn in the rocks, probably sepulchral. About six miles from Bournoubat, the road led through a forest of old pine-trees, growing on the rocky sides of the mountain pass, through which we caught occasional glimpses of the glen beneath us. Higher up the country became wild and savage, until, on reaching the summit of the ridge and descending towards the north, we found the ground wet and boggy, and covered with a luxuriant vegetation, amongst

which the Spanish chestnut was conspicuous, which does not grow on the southern side of the hill. The lake itself is of great depth, and is said to be full of fish; it is surrounded by thickly wooded hills, out of which pinnacles of limestone-rock rise to a considerable height. The view to the N.W. is very striking, overlooking the valley of the Hermus. We returned by another road, to visit the caves, which overhang the ravine by which we had ascended, and which have acquired the name of the Caves of Homer. They are plain and unimportant, about five feet high, and extend from twelve to fifteen feet into the rock; they were probably sepulchral, and are now used as places of refuge for the shepherds, who occasionally pasture their flocks in this mountainous region.

Chandler, in his account of the neighbourhood of Smyrna, mentions a supposed cave of Homer, pointed out to him near the upper aqueducts of Megalos Paradeisos, and which he says he visited. This cave, into which I descended amidst brambles and weeds, is a long narrow passage, excavated in the soft calcareous tuff which has been deposited by a neighbouring spring, and in which are a few impressions of the leaves of recent plants. The gallery is evidently the remains of an ancient aqueduct, for the purpose of conveying the water through the projecting promontory, where the rock was too precipitous to carry it round. It resembles, both in shape and appearance, those which are seen in the hills in the neighbourhood of Rome, and its antiquity is probably not very great.

Another remarkable feature in the neighbourhood of Smyrna is the wall, which extends nearly east and west along the summit of the ridge to the south of Mount Pagus, separating the deep ravine of the Meles from the plain of Budjáh; it is nearly two miles in length, and crosses both the upper and lower roads from Smyrna to that village, although broken and interrupted in places. It appears to commence at the eastern end, on the hills above Budjáh, without any apparent cause or object, making a sharp angle

from north to west on the hill side. Then crossing the upper road to Budjáh, it is carried over the ravine on arches, after which it extends nearly due west to the summit of the hill, where the remains of a square building or tower are still to be seen forming a portion of it; from thence, it descends the hill, in the same westerly direction across the lower road, until it terminates abruptly at the extremity of the trachytic cliff on the right bank of the Meles, about 300 or 400 feet above the bed of the river, and at a distance of nearly half a mile from the ground at the same elevation on the opposite side.

It is difficult to conjecture what this wall may have been intended for, or to reconcile the various opinions concerning it. At Smyrna it is called the Roman aqueduct; whereas Chandler, in the slight notice he has given of it, calls it the Pomœrium, which encompassed the city at a distance. The style of architecture is mean and ordinary, and resembles in character that of the modern castle. There are several reasons which militate against the supposition of its having been an aqueduct; for why should an aqueduct be carried over the highest portion of the ridge rather than round the hill? Besides which, there is no appearance of water or springs on the side where it begins, and at its western extremity it terminates abruptly at the edge of a lofty cliff. On the other hand, if intended to serve as a wall of defence, it is difficult to understand the object of carrying it on arches over the ravine near the upper road to Budjáh, unless to leave a passage for the torrent, which in rainy seasons finds its way down there. But if this be the case, it must have been built at some late period of the Byzantine empire.

Amongst the other antiquities of Smyrna, most of which have been fully described by Pococke, by Chandler, or by Arundel, the theatre which is situated upon the N.W. slope of Mount Pagus is well deserving of notice, on account of its great extent. The proscenium is entirely gone; but at the western extremity of the cavea, the substructions

of the marble seats, and a vaulted passage of large dimensions and great beauty of construction, still remain. The proscenium must have been of colossal magnitude, to have filled up the hollow between the two extremities of the wings, which are still visible. The effects of streams of water flowing down from the summit of the castle hill during many centuries, are very striking; and Mr. Lyell would have looked with interest on water-courses and ravines intersecting the spot where the inhabitants of Smyrna, little more than 2000 years ago, witnessed the performance of a tragedy of Sophocles, or a comedy of Aristophanes. All the buildings in the part of the Turkish town near the theatre bear testimony to the depredations which have been committed on its ruins. High walls are entirely built of blocks of stone derived from that extensive quarry; and the neighbouring burial-grounds, like those in the vicinity of the well-known Caravan Bridge, are filled with fragments of ancient art.

In modern Smyrna, the objects most deserving of attention are the bazaars, which, though inferior to those of Constantinople, are in some respects more remarkable. Goods of different kinds are sold in different parts, arranged in wooden booths spread over a large extent of ground. The narrow road or path between them is covered in, and sometimes boarded under foot. At night they are regularly locked up and guarded by watchmen. One long row of booths is occupied by the sellers of dried fruits, where baskets of raisins, figs, dates, apricots, and plums are arranged in inviting piles; whilst a neighbouring gallery is occupied by shops, solely devoted to the manufacture of the wooden drums or boxes in which the figs of Smyrna are sent to Europe. Fresh fruit is usually sold in the streets and open market-places. In another part are the bazaars for ancient arms, matchlocks, yataghans, and pistols, with other curiosities, and objects of virtú. Pipes are sold in another quarter, and one gallery, called the English bazaar, is occupied by cotton goods, and printed calicoes chiefly from Manchester.

But perhaps the most striking object there is the great variety of curious and gay costumes, various even amongst the different classes of Turks; but still more so from the heterogeneous nations that swarm and congregate in this busy quarter. The grave and stately Turkish merchant or shopkeeper, in his ample robes, and squatting on his shop-board, contrasts with the strong, active, and almost gigantic *hamal* or porter, bending beneath a burthen which it seems scarcely possible for the human back to sustain; though I have been informed that it is not unusual for them to carry a load of twelve or fourteen cwt. Their dress is as simple as that of the other is ostentatious, with bare legs and white drawers, and a wisp of cotton-cloth rolled round their dirty fez or red skull-cap. Again, the Xebeque from the mountains, and the banks of the Mæander, with bare legs and white drawers fitting tight to his thighs, but made preposterously loose behind, with his high and gaudy turban bedecked with tassels and fringes, is a very different being from the Euruque or Turcoman, clad in sombre brown, tramping along in heavy-shod iron boots, and driving on his camels and asses laden with charcoal for sale. Then the Armenians and Levantines, with their huge kalpaks and flowing robes, their dark complexions, and clean-shaved chins, are as different from the mean-looking fair-haired Jews, with bare foreheads, long-pointed beards, and rather open necks, as anything can well be imagined: it is extraordinary how many fair effeminate-looking persons there are amongst the Jews of Smyrna. Again, what a striking difference we see between the proud chavasse with his splendid arms, his dagger, pistols, and silver-mounted yataghan, and the bandy-legged, half-starved tactico (regular infantry soldier), with his ugly, useless fez and blue tassel, looking half angry and half ashamed of his ill-made and unmahometan dress! Hard by is a long train of Turkish women, silently shuffling along in their yellow slippers, whose spectral dress forms a striking variety to the party-coloured figures by which they are surrounded. Their faces are invisible, being concealed by a black silk mask, which

strangely clashes with the white shroud or cloak thrown over their heads, and which almost envelopes their bodies in its ample folds. It is rare indeed that any other part of their dress can be seen but the hem of a robe or the tip of a yellow boot.

But Smyrna must be seen to be understood; the soft Ionian climate must be felt before it can be appreciated; and with the change which has of late taken place in the Turkish character, a residence in Smyrna or its neighbourhood would be as free from alarms as any part of Italy or Spain: indeed, I might say, much more so. There is an exquisite softness in the air of this climate at the commencement of spring, when the ground is enamelled with flowers, of which no description can convey an idea. But I must not anticipate; we are still in the middle of winter; and a most severe one it proves to be.

At the end of December the kindness of Captain Mundy offered me a cruise on board the "Favorite," and as I trusted that a month or six weeks at sea would remove all remains of fever, I accepted the proposal. We were bound in the first place for Athens; but contrary winds compelled us to put into the small harbour of Fouges, the ancient Phocæa. This place, conveniently situated near the northern entrance of the Gulf of Smyrna, was one of the most celebrated on the coast of Asia Minor, in the early days of Greek navigation, and till the fortunes of war drove its inhabitants to become the founders of Marseilles. The harbour is very snug, and protected from all winds except the west. The modern town is situated on a narrow tongue of land, extending into the little bay from the east, and corresponding with the description of it, and the two harbours Naustathmon and Lamptera, given by Livy* in his account of the war with Antiochus.

It now contains 1,000 houses, of which 600 are Turkish, and the remainder Greek. It is built on the peninsula and surrounded by walls, which appear to be Genoese. Some

* Lib. xxxvii. c. 31.

blocks of stone and marble have been let into the walls on the land side, but in general few remains of antiquity were to be seen. Within the town I saw fragments of columns, and outside the gate a large marble sarcophagus, which appeared never to have been finished. The surrounding hills are volcanic, consisting chiefly of indurated trachytic tuff, with other igneous rocks occasionally protruding through them. To the N.E. of the town, and near what seemed to have been ancient quarries, I discovered a mass of beautiful white kaolin in a soft and decomposed state, capable, I should think, of being manufactured into the finest porcelain. All the rocks in the neighbourhood appeared to contain a very large proportion of felspar, from which millstones have been cut.

On the 2nd of January, 1836, we sailed from Fouges, and the following night, while passing through the Doro Passage in a gale of wind with snow-squalls and rain from the N.E., we narrowly escaped being wrecked under Cape Colonna, through the ignorance of our Maltese pilot; the wind then headed us down the Gulf of Athens, and Captain Mundy not choosing to trust his pilot any longer, bore away for Cape S. Angelo, the S.E. extremity of the Morea, behind which we found shelter in the Bay of Vathica, close to the island of Servi. The gale increased during the day, and as we scudded under close-reefed top-sails and courses, we observed the rocky shores of the Morea covered with snow to the water's edge, and were close to its iron-bound coast as we passed round the point, with the wind from the N.E. During our detention at Servi we found excellent shooting on its barren shores; wild ducks, teal, woodcocks, and snipes abounded in the lowlands and pools, but no inhabitants, though there are several traces of quarries in the soft shelly rock, which forms an extensive low, level plain near the sea-shore. We were five days beating up to Athens, after which we visited Syra before we returned to Smyrna.

We reached Smyrna on the 27th January, and found that

during our absence the weather had been severe beyond all experience. Snow had fallen in the streets, and the frost had lasted several days, the effects of which had been most seriously felt in the gardens near Smyrna and Bournoubat. The principal crop of oranges had not been gathered, and they were destroyed on the trees. One individual, who possessed large gardens in the island of Scio, lost, as I understood, about 500,000 oranges. In return woodcocks had never been so plentiful, and were driven by the weather even into the gardens of the town. Two were shot in that of Mad. Marracini, a strip of ground about fifteen feet wide and forty or fifty long, situated in the very heart of the city. The weather was still wet and unsettled, and we were anxiously expecting the return of spring and sunshine to commence operations in the interior; but after waiting some time in vain, Mr. Strickland and I determined to take the opportunity of paying a visit to Constantinople, where the plague had ceased, and where weather was of less consequence.

Accordingly on the 20th February we embarked on board the "Crescent" steamer, anticipating a speedy passage to the Turks' terrestrial paradise. But on the following day as we approached the mouth of the Dardanelles it was blowing a gale down the straits, accompanied with snow and sleet, which prevented our seeing anything of the coast. As we entered the Dardanelles, keeping close along the European shore, one large tumulus was alone conspicuous on the opposite plain of Troy.

Notwithstanding the bad weather, several boat-loads of Turks and Greeks came off at the Dardanelles to avail themselves of the magic powers of a wheel-ship, as the Turks call the steamers, in setting at nought both wind and current. Nothing could exceed the noise and confusion of their getting on board, boats knocking violently against each other, and so crowded that we fully expected to see them swamped, while the boatmen increased the terror of their passengers by shouting and hurrying them, that

they might themselves get back to shore. It was only of late that the Porte had taken off the prohibition against Turks and Rayahs going by the steamers: at first, indeed, the government promised every possible encouragement, but afterwards, with its usual vacillation and jealousy, forbade its subjects making any use of them.

At dinner we were joined by a few of the principal Turks, several of whom seemed disposed to take more than the Prophet's allowance of the forbidden liquor, particularly a young Bimbachi or colonel, who, with another companion, having once broken the ice, was getting rather boisterous and troublesome. Their mirth, however, was soon disturbed by an alarm of the ship being on fire. A general rush was made on deck, when it appeared that a large bundle of tow intended for the use of the machinery had caught fire, in consequence of the negligence of a Turk, who had knocked out the ashes of his pipe into it, but had been immediately extinguished. The alarm and terror of the Turks exceeded all belief; Kismet and predestination were entirely forgotten, and they ran about the decks stupefied by fear. Many of them rushed into the long boat hanging at the quarter, and were on the point of lowering it into the water, in which case they must have been inevitably drowned; others were for running the ship ashore, where she must have struck upon a reef of rocks. Shouts of "a terra, a terra!" resounded on all sides, and I was assailed with cries of "dite al capitano che vada a terra." Some of the chiefs offered a large sum of money to be landed at Gallipoli. They were alarmed too by the darkness of the night, when the Turks invariably come to an anchor in their own boats. The gale continued through the night, and the following day we were ploughing our way through the Sea of Marmora, contending with adverse winds; the hills on the Asiatic coast being covered with snow to the water's edge.

At length, after rounding the point of S. Stephano, we caught the first faint glimpse of the minarets of Sta. Sophia, and the neighbouring mosque of Sultan Achmet; but on

approaching the mouth of the Bosphorus we were again enveloped in a violent snow-storm, and as we passed under the gardens of the Seraglio every object was concealed, until we had dropped our anchor in the Golden Horn. Then, as under the influence of a magician's wand, the wintry curtain was withdrawn, and the real beauty of the scene was exposed to view. Behind us the mouth of the Bosphorus and the Golden Horn land-locked by the Asiatic shore was lighted up by the evening sun, whilst to the right and left the ground rose abruptly from the water's edge, forming a rich amphitheatre of buildings, mosques, minarets, and trees. On our left were the seven hills of Constantinople, on which the tower of the Sublime Porte, the Seraskier's tower, and the graceful minarets of the many royal mosques, rose far above the common houses, whilst the Fanar stretched along the water's edge in front; on the right were the suburbs of Galata, Pera, and Topkhana, and above them the Tower of Galata, whose summit commands one of the finest panoramas in the world. The harbour was crowded with shipping; and vessels of every size, from the 74 at anchor to the light and frail caiques which were gliding about in every direction, gave life and motion to the scene.

About four in the afternoon we landed by one of the caiques peculiar to Constantinople; they have no keel, and are therefore easily capsized. They are the most ticklish things in the world, for if, in getting into them, you do not step exactly in midships, you will be inevitably upset, unless the caikji counteracts the effects of your inexperience by quickly throwing himself over to the opposite side. But all sense of danger is forgotten on seeing the grace and ease with which the boatmen, who are both Greeks and Turks, pull; but the peculiar crankness of their caiques compels them to sit with unusual gravity and steadiness; and when two or more are pulling in the same boat, the exact uniformity of time and motion, as they bend forward to their oars, almost looks like the effect of ma-

chinery. We landed at Topkhana, and passing close to the beautiful fountain covered with paintings, and gildings, and arabesque ornaments, we toiled up the steep and dirty streets to our lodgings in Pera, the chief residence of Europeans and Christians. But alas! the beautiful illusion was destroyed; and however fair and bright the exterior may have been, the streets were narrow and filthy, swarming with ragged boys and savage dogs, the latter yelping and barking at every Frank. The dogs at Smyrna were bad, but those at Topkhana were beyond comparison worse—more savage and more annoying, and a good whip or stick was indispensable.

The Bosphorus is the glory of Constantinople; its winding shores, studded with cypresses and painted palaces, with the latticed windows of the secluded harem, offer a change of scenery at every instant as you ascend the current, until at length the mystery of this sea-river is solved by the sudden opening of the Black Sea above Therapia, where the "dark Euxine rolls upon the blue Symplegades."

Andreossy, in his "Essaye sur le Bosphore," has attempted an account of the geology of this part of the coast, but he has greatly mistaken the age of the fossil remains and the stratified deposits. The reader will find this subject fully treated in Mr. Strickland's Memoir, published in the fifth volume of the "Transactions of the Geological Society."

Immediately opposite Therapia the Giant's Mountain rises to a considerable height, from the summit of which are commanding views both up and down the Bosphorus. The upper part of the mountain consists of argillaceous schists containing numerous fossils analogous to, if not identical with, a part of the Silurian system in England, so clearly defined by Mr. Murchison.* It is remarkable to find these ancient rocks recurring at such a distance from the type of their formation.

* This distinguished geologist has since discovered a similar formation in the north of Russia.

The rocks along the coast to the north are entirely igneous, consisting of irregularly columnar trachyte and greenish phonolite, with extensive beds of stratified volcanic tuff and trachytic conglomerates. This conglomerate is generally of a green colour, the matrix being much harder than the imbedded masses of brown trachyte, which decomposes rapidly, leaving the green matrix honeycombed; but in some cases the imbedded masses are harder than the matrix, and project beyond it. This rock is often traversed by veins of chalcedony and agate, which extend through the imbedded fragments as well as the matrix, thereby proving its more recent formation. It is also traversed in many places by trap dykes. A large mass of columnar basalt is exhibited at a place called Youm Bournou, in the Black Sea. In the little bay of Kabakos we picked up many beautiful agates and cornelian pebbles, which had been washed out of the trachytic rocks. On the European side, near Kavak, the same green trachyte and conglomerate occurs as on the Asiatic side, so that thus there can be no doubt, from the identity of formations on each side of the Bosphorus, that the land was once continuous, and the Black Sea a vast inland lake, although we cannot yet say by what agency the outburst was effected.

The greatest activity prevailed in the arsenal during our stay in Constantinople. I was conducted over it by Namik Pacha, who took me on board the new 74-gun frigate, built for the Sultan by an American; she is probably the largest frigate in the world. Her depth of hold is very great, to enable her to support the lofty masts and heavy spars which have been put into her. In the arsenal a steam-engine had lately been erected for sawing wood, and another for flattening bars of copper by graduated rollers. This had been lately broken, in consequence, as we were told, of Tahir Pacha insisting upon a thick piece of copper being placed at once between the narrowest rollers. There was another engine, now out of order, for boring iron guns. Although in many of their ships of war the Turks have

exchanged their brass for iron guns, they still continue casting the former. A large vessel alongside the quay was unloading a cargo of chain cables, of various sizes, brought from England, for the use of the Turkish navy.

The square building in which Namik Pacha and the Capitan Pacha reside, near the entrance to the arsenal, is roomy and substantial, and its bright colours and gaudy ornaments present a fair specimen of this kind of architectural decoration amongst the Turks. The whole body of the house is painted brown and white, with three broad bands of deep blue, studded with stars of gold, running round it. The first was between the roof and the upper windows, the second between the two rows of windows, and the third below the lower windows; but these houses, however elegant in appearance, are built entirely of wood, and are consequently very hot in summer, and extremely cold in winter, and fall an easy prey to the flames, which are constantly destroying some portion of the city.

The reservoirs of water for the supply of the town in the picturesque forest of Belgrade, called bendts by the Turks, are well worthy of a visit. Some are of great extent, whole valleys being dammed up by massive walls to form these gigantic tanks, from whence the water is conveyed into Constantinople by means of aqueducts, some of which are of great antiquity and considerable length, partly carried along the sides of the hills, and partly over intervening valleys. Of the latter, that of Justinian is the most striking, the others being chiefly of Turkish construction. The trees in this forest, which are chiefly oaks and chestnuts of large size, are not allowed to be cut down, from the idea that they keep up the moisture of the soil and atmosphere, and thereby tend to secure a constant supply of water for the use of the capital.

At length, the weather having moderated, we determined to return to Asia Minor, and to travel to Smyrna overland, by Moudaniah and Brusa, with a view to the exploration of the valley of the Rhyndacus to its sources near Azani. The

best conveyance across the Sea of Marmora is one of the island or Moudaniah boats, which bring vegetables and other supplies to the capital; and with the assistance of Mustapha, well known as the janissary attached to the British consulate, we engaged a large boat with five pairs of oars, to take us across, for 150 piastres, in preference to being dragged at a full gallop round the Gulf of Nicomedia in one of the Sultan's newly-established post waggons.

CHAPTER V.

Leave Constantinople—Moudaniah—Brusa—Lake of Apollonia—Kirmasli—Ruins at Hamamli—Kesterlek—Mountainous road from Kesterlek to Adranos.

TUESDAY, March 22nd.—After all our preparations had been made, and our luggage put on board, we were detained for some time at the Custom-house, by the absence of the officer whose duty it was to give the usual Teskeray or permit, without which the boatmen did not dare to sail; or they would have been exposed to much vexation and expense on reaching Moudaniah. The view of Constantinople, Pera, and Scutari, as we dropped down the Golden Horn and entered the Bosphorus, was extremely striking, and the tall minarets of Sta. Sophia, Sultan Achmet, and Suleimanli were seen to great advantage through the clear frosty morning air.

Shortly before sunset we rounded the bluff rocky Cape of Bozbournou (Grey Nose), called by Ptolemy "Posidium promontorium." These rocks are volcanic, and form the extremity of the chain of hills which separates the gulfs of Nicomedia and Nicæa. They consist of rounded masses of trap imbedded in a greenish paste, resembling those at the entrance to the Bosphorus from the Black Sea, and at a distance have the appearance of a rude Cyclopian wall.

On entering the Gulf of Nicæa, we landed for a short time near a fine spring of fresh water, much frequented by the Greek sailors of Moudaniah. It was past ten P. M. before we reached the opposite shore, where we expected to pass the night in the boat, in consequence of the difficulties made by the Custom-house officers, who pretended that we had not got a proper Teskeray. But we soon over-ruled their objections, and were glad to content ourselves with the café for a konak.

The arrangements of this house of entertainment were simple enough. A stage between two and three feet high was erected round the room, extending about eight feet from the wall, and divided into separate apartments by a single rail; each party of travellers accommodated themselves as well as they could on their own carpets, within each division, whilst the cafidji was busily employed at the little fire-place, fixed in the wall at a convenient height, preparing coffee in diminutive cups for his various guests, or assiduously supplying them with charcoal for their pipes.

We were not yet sufficiently accustomed to the publicity of Eastern life, to enjoy passing the whole night in the common room, and therefore prevailed upon the cafidji to give us up a small but totally unfurnished apartment, where with the help of our carpets and mattresses we made ourselves tolerably comfortable.

March 23rd.—Moudaniah to Brusa, six hours. Much time was lost this morning in making our arrangements and apportioning the baggage into loads for the pack-horses. This necessity of carrying everything on horseback, and the frequent loadings and unloadings which are constantly occurring, form a serious objection to travelling in Turkey. Our party consisted of Mr. Strickland and myself, our servant Theodore, and an interpreter whom we had engaged at Constantinople, Giuseppe by name, a native of Trieste, an excellent Turkish scholar, and who also spoke Greek, Italian, French, and Russian, with perfect fluency. Three baggage-horses and two surijis to lead them completed our train.

The post-horses generally throughout Turkey, although small and ill-looking, are active, and capable of enduring great fatigue; we were here extremely well mounted; and besides a strong firmahn from the Porte enjoining all pachas, governors, mutzellims, and aghas, throughout the Turkish dominion, to attend to our wants and afford us whatever assistance we might require, we had also provided ourselves with a Menzil Bouyourdi (or post horse order) so

that we had no difficulty in procuring horses all along the road, even without a tatar, at the moderate price of one piastre, or about twopence halfpenny per hour for each of our nine horses.

Leaving Moudaniah we ascended amidst gardens and orchards the hills which form the southern shore of the Gulf of Nicæa, and left the cultivated plain of Bourgaz below us on our left. We saw several storks to-day for the first time: the regularity with which these birds return to their summer-quarters is a very curious fact; as each successive year witnesses their return almost on the same day*. At Smyrna they generally appear on the 9th of March, and when I was there in the following year during that month, I saw them on the 10th for the first time. They are much protected by the Turks; and independently of the superstitious motive that a house on which they build is insured against fire, they are of great use to the peasant and the farmer by following the plough, and devouring the grubs as they are turned up.

Between the sea and the river Nilufer, or Lufer Sou, called by the natives "Delhi Chaï," which we passed about nine miles from Moudaniah, we crossed a chain of hills of tertiary formation, consisting of white marly limestone, with a few beds of sand and gravel, containing small calcareous concretions. The soil was rich and loamy, and appeared capable of the finest cultivation; but it was melancholy to remark here, as in other districts of Asia Minor, the rapid diminution of the population, to see villages in ruins and abandoned, and large tracts of land, on which the former marks of the plough were visible, now totally neglected, producing in the spring a rich supply of thistles, or affording in the summer a scanty pasture to the flocks of wandering tribes. The Nilufer flowed through a flat and rich alluvial plain, having worn for itself a deep bed through the clayey soil, the sides of which were thickly wooded with tamarisks and plane-trees.

* Chandler, Asia Minor, vol. i. p. 91.

After crossing the river, our course changed from south to east by south, when we had a range of low grassy hills on our right, studded with small oaks, wild almond, and wild pear-trees. Two miles beyond the river, on the summit of this range, we passed the village of Balat Kieui on our right, and descended upon a wild and undulating plain producing nothing but oak-coppice and thorns. The town of Brusa was here first visible, bearing S.E., with the magnificent snow-capped mass of the Mysian Olympus rising immediately behind it.

After again crossing the Nilufer flowing from the mountains to the S.W. into the plain of Brusa, we observed many copious streams of water on our right; and within half a mile of the town passed the hot-springs which have acquired so much celebrity. So great an amount of sediment has been deposited by these springs that they have formed a long range of low travertine hills, resting against the foot of the more ancient rocks which form the mountain chain.

No town in Asiatic Turkey is more celebrated, or more justly so, for its picturesque situation and appearance than Brusa. Situated at the southern edge of a rich and well-cultivated plain, covered with gardens and mulberry plantations, its buildings extend some way up the steep and rocky hills which rise immediately behind it. Thick overhanging woods begin directly above the town, while many trees, principally the tall cypress, rise up in and about it, interspersed with numerous graceful minarets and glittering domes. To complete the picture, a flat table-land, standing out a little in advance of the hills, rises up in the middle of the town, the precipitous cliffs of which are surmounted with the ivy-clad walls and towers of a castle of an early age, dating probably from the time when Brusa was the capital of the Turkish empire. Such a scene, on a sunny day, when every tree and flower was putting forth its first shoots and buds, backed by the range of

Olympus, whose deep and snowy valleys reflected every variety of tint, was the most welcome sight which could greet a traveller on his first appearance in the East.

A rapid torrent flows along a deep and rocky bed through the town, and separates the Turkish from the Armenian quarter. Two stone bridges, each of a single arch, keep up the communication between them, by one of which we crossed to the Armenian side, where we procured comfortable lodgings. Like most Turkish towns, Brusa is well supplied with fountains at every corner, and streams of water run through almost all the streets. But this, however delightful it may sound in a sultry climate, is, from the accumulations of mud, productive of more inconvenience than pleasure. The bazaars are poor and ill supplied; the chief trade, which is in silk, the produce of the surrounding districts, being carried on in khans, the largest of which is called the Ipek-khana, or silk-khan.

On the flat table-land which I have mentioned, we found the remains of an ancient gateway and wall of huge blocks of stone, which must unquestionably date from classic times; so that there can be little doubt that this hill of travertine was the first Acropolis of Brusa. In this part of the town is the mosque of Daoud Monasteri, formerly a Byzantine church; it is small and not very remarkable for the richness of its architecture, but it contains the tomb of the celebrated Orkhan, son of Othman, who in 1326 wrested the town of Brusa from the hands of the Byzantines. A priest or hodja of the neighbourhood was willing to show us the interior, on the double condition of a few piastres for himself, and our taking off our shoes in honour of the prophet. In general this last ceremony is a matter of indifference, as the mosques are almost always spread with thick carpets: in this case, however, and in this season, the bare marble slabs were not so agreeable. The floor consisted chiefly of Byzantine Mosaic, while the marble walls were inlaid with various patterns, in one of which I

was surprised to see the figure of a cross, which had escaped destruction by the hands of the Turks. The tombs of the conqueror and his family stand upon a raised dais in the centre.

To the west of this mosque was the ruined castle, with two gateways, one to the south and the other to the west, on each side of which were some very rude bas-reliefs. The area of the castle had been converted into gardens, and nothing remained but the outer wall, of alternate courses of brick and stone, flanked by several towers in a state of ruin.

March 24.—Remained at Brusa. We had intended to ascend Mount Olympus, but it was impossible to do so at this season on account of the snow, which was still unmelted. The beauty of a spring morning, and the wooded hills behind the town, and a wish to observe their geological structure, drew us from our couches at an early hour. The ground was enamelled with flowers of every description,—violets, anemones, crocuses, primroses, &c., forming a rich carpet under the branches of the trees. Keeping along these hills towards the west, we descended by a rocky path over masses of marble and mica schist, of which the hills consisted, into the deep glen behind the town. In the bottom of the ravine we found the lower beds of limestone penetrated to some distance by quartzose granitic veins, apparently the terminations of large veins, and indicating the existence of those plutonic rocks of which Mount Olympus is supposed to consist.

We followed the stream down the ravine for some distance towards the town, until the steep cliffs by which it was confined compelled us to cross it by a bridge, consisting of a single plank only seven inches wide, fixed amongst the rocks high above the bed of the stream. The scenery was wild and beautiful, and a more substantial bridge lower down enabled us to recross to our own side.

The origin of Brusa is very obscure, for although Pliny

says that it was founded by Hannibal,* he probably only meant to imply that it was contemporaneous with the residence of that chief at the court of Prusias, King of Bithynia: but though it continued to flourish under the Roman Emperors,† it seems never to have been looked upon as the capital of that country. The greater facility of communicating by sea with Constantinople gave this precedence at one time to Nicomedia, and at another to Nicæa; and from the slight mention which is made of Brusa during the best periods of the Byzantine empire, it would appear to have soon yielded to the rapidly increasing greatness of the mistress of the East.

The importance of Brusa as the capital and residence of the Turkish rulers of Asia Minor, commences soon after the destruction of the kingdom of Iconium and the retreat of the Moguls under the descendants of Zengis Khan in the thirteenth century.

On the death of Gelaleddin, the Sultan of Carisme, in 1240, his army was dissolved. Some of his followers entered the service of Aladdin, the Sultan of Iconium, amongst whom were the fathers of the Ottoman line. Orthogrul, the son of Soliman Shah, became a soldier and subject of Aladdin, and established his camp of 400 families or tents at Surghut, on the banks of the Sangarius, ‡ in the same year. His son Thaman, or Athman, subsequently called Othman, trusting in the valour of his followers, and released from all dependence on the now extinct line of Seljukian sultans, carried on a religious war against the Christians, and in 1299, having forced the ill-guarded passes of Olympus, descended into the plains of Bithynia. But Othman was old before he received the intelligence that Brusa had

* N. H., lib. v. c. 32.

† Plin. Epist. x. 85. Cramer, Asia Minor, i. 177. Browne's Travels in Walpole's Turkey, ii. 108.

‡ It may be remarked that the extensive plains on the banks of the Sangarius are still a favourite resort of great numbers of Turkman tribes.

surrendered to the arms of his son Orchan. This conquest was soon followed by that of Nicæa and Nicomedia; and during the reign of Andronicus the younger, the whole province of Bithynia fell into the hands of Orchan, whilst the other provinces of Asia Minor acknowledged the sway of other Turkish Emirs.

Under Orchan and his successors, Brusa, or Boursa as it is called by the Turks, became the capital and residence of the Ottoman sultans. Here Amurath I. and Bajazet I. successively held their court; and after the fatal battle of Nicopolis, in 1396, when, on the banks of the Danube, Bajazet defeated the united forces of the French and the Hungarians, the Count de Nevers, and four-and-twenty French nobles and knights who were taken prisoners on that occasion, were confined for several years in this place.

But the prosperity of Brusa soon came to an end. After the memorable battle of Angora, when the genius of Bajazet sunk under that of a greater chieftain, Tamerlane established himself at Kutahiyah, and thence despatched his eldest and favourite grandson, Mirza Mehemmed Sultan, with 30,000 horse, to secure Brusa; but, notwithstanding the speed with which Mirza executed his march, Soliman, the son of Bajazet, had already passed over to Europe with the royal treasure. The city, however, did not escape, but was plundered and reduced to ashes.

Bajazet died at Aksheher soon after his defeat, leaving five sons, under whom the Turkish empire was distracted by civil wars. Mustapha, the eldest, ascended the throne of Adrianople, which had now become the capital of the Turkish province of Romania; whilst Mousa reigned over the ruins of Brusa. Soliman for a while united the two, but it was under Mahomet I., the youngest son of Bajazet, that the Ottoman empire was ultimately restored.

Mahomet I. died at Brusa in 1421, and was succeeded by Amurath II., the great Sultan Murad. During his reign, Brusa appears to have yielded to Adrianople as the capital of the Ottoman empire, until the conquest of Constanti-

nople by his son and successor Mahomet II., when both sank into comparative insignificance. From this period, no longer the resort of princes and chiefs, and removed from the healthy influence of European contact, Brusa, still endeared to the Turks by associations and recollections of its former importance, as well as by the charms of its situation, became for a long course of years the resort of Mahomedan bigotry and superstition, and few towns in the Turkish empire have been so remarkable for the hostile spirit shown to Franks and Christians.

Of late years, however, the character of its inhabitants appears to have undergone considerable change. Browne observes in his narrative that in the year 1801 wine was not allowed to be publicly sold, and that the inhabitants were remarkable for their fanaticism and intolerance; but now, as we were informed by an Armenian merchant for whom we had brought letters of introduction from Constantinople, not only wine but even the flesh of the wild boar is allowed to be sold publicly in the streets. He also confirmed the commonly received opinion respecting the healthiness of the situation of Brusa, but added that all the inhabitants were more or less victims of habitual intemperance and sloth.

In his house we saw, for the first time, a practice which is prevalent amongst the Franks as well as the Greek and Armenian merchants, viz. of covering the carpets and divans with a coarse cloth made of goats' hair, in order to prevent the contagion of the plague. This coarse cloth is, as well as wood, everywhere considered as a non-conductor of plague. It is therefore usual for travellers and merchants in the interior, who are at all apprehensive of this disease, to have large sacks made of it, into which smaller articles, or such as are susceptible of communicating infection, are placed, in order that they may not come in contact with the surijis, the horses, or their pack-saddles.

The principal features of Brusa are its hot-springs. The chief source is about a mile and a half to the west of the

town; it rises out of a calcareous tuff or travertine, the formation of which is still going on in some places; the thermometer rose in it to 184° Fahr.; and about a hundred yards farther west is another spring, the temperature of which was only 180° Fahr. At both places baths have been built, which are much frequented by the Turks, and are used by the men and women on alternate days. In some of the springs there is a considerable escape of sulphuretted hydrogen gas.*

At Brusa are many Jews, one of whom was our guide to the hot-baths, &c., and neither he nor his countrymen formed any exception to the charge of filthiness and dirt which is generally brought against their race. Spanish is the language spoken by all the Jews of Brusa—not very purely it must be admitted; they are said to have taken refuge in the East when expelled from Spain in 1492.

March 25.—Our intention on leaving Brusa was to visit the lake of Apollonia, to trace the course of the Rhyndacus, if possible, to Azani, and to ascertain its sources in the mountains of Azanitis. It was a road unknown to European travellers, and we had much difficulty in obtaining information respecting the cross-roads even within moderate distances. We were detained some time for horses in consequence of the arrival of a new Mutzellim, lately governor of Kutahiyah, whose friends and dependents, displaced by the new governor of that place, were flocking in every day, in the hopes of obtaining employment at the hands of their former patron.

Soon after one P. M. we started for Kirmasli, situated on the banks of a large river, falling into the lake of Abullionte, and which we expected would prove to be the Rhyndacus. Leaving Brusa, a range of wooded hills extended

* The stream of hot water which flows away from the bath, and has a temperature of 97° Fahr., is inhabited by the Melanopsis buccinoidea, an univalve shell of frequent occurrence in the rivulets of Asia Minor. This mollusc seems to prefer warm water to cold, for it here existed only in the warm stream, and not in a rivulet of cold water close by.—(H.E.S.)

for some way on our left, on which was the picturesque village of Tchekirdgi, about half a mile from the road, and near it the old baths called Eski Kaploujah. A mile and a half farther we left the road to Moudaniah on our right, and soon reached the Lufer Sú flowing from the south-west; at 3h. 18m. we crossed it by a long bridge called Adjem Keupri, or the Persian Bridge, soon after which a road on our left struck off to Adranos, said to be twelve hours distant.

Crossing the low hills which formed the left bank of the Lufer Sú, we descended into a rich and highly cultivated plain, sloping gently to the north, partly meadow and arable, partly covered with vineyards and mulberry-plantations, and dotted with numerous villages; the line of the road was generally marked by well-grown and sometimes pollarded elm-trees, oaks, and willows, round whose branches the wild vine and the rose, the briar and the clematis, twined their long pendent branches. On reaching Tartali, a small village four hours from Brusa, where we had intended halting for the night, we heard such a bad account of its accommodations that we determined to continue two hours farther. We were not yet up to this trick of Turkish villagers, who, dreading the contributions and forced hospitality which are generally exacted by those who travel under the authority of the Porte, look upon such visitors as a tax rather than a blessing, and endeavour by every means in their power to deter them from halting in their village; yet, no sooner do they see that the traveller is determined to stop with them, than the innate hospitality of their nature is called forth, and every exertion is made to render him as comfortable as their limited means will admit of. We did not reach Hassan Agha Kieui, a small village containing 150 houses, and six hours from Brusa, until after seven, having contrived to lose our way amongst the hills.

After waiting half an hour in the road, we were led into a miserable stable, one corner of which had been turned into

an oda or lodging, by means of a thin partition of wattle and mud, which separated us from some horses, who, by their constant pushing against it all night, threatened the immediate demolition of the frail tenement. Our host, a poor old man, on being asked whether he ever saw or found any coins or *eski para* (old money), replied that he never saw either old or new; and yet he sent us a substantial meal, consisting of two barley loaves, two large onions, and a mess of sweetmeat called boulamáh, made of honey, vinegar, and fresh wine,* mixed up together. Sentences from the Koran, written on thick paper or parchment, were stuck up as charms on the crazy walls.

March 26.—We left Hassan Agha Kieui before six, and on reaching the summit of the hills, obtained a fine view of the lake of Apollonia, with several islands on its surface. On our descent we continued along the foot of the mountains on the left, with an extensive plain on our right, until 7h. 20m., when we found ourselves abreast of the lake. At 8h. 5m. we were travelling through a wide and richly cultivated plain between the mountains and the lake; where corn, vineyards, and mulberry-plantations occupied the greatest space. The wooded hills on the left consisted of limestone, apparently of the scaglia formation. The water in the lake was very high, reaching to the upper branches of the trees, now a long way off from the shore, but which were on dry land in summer; we were consequently obliged to wind round many deep bays and inlets of the lake, although the real road runs directly across from one headland to another. At other times we found ourselves on the hill side, amidst a great variety of shrubs and flowers, chiefly arbutus and bay, growing luxuriantly, and were often obliged to force our way through the odoriferous bay trees closely matted together with various creepers, and over rugged and rocky paths. Here we were constantly looking out for the Rhyndacus, as we had not yet crossed

* This was the description given me at the time; but I rather think it must have been the unfermented juice of the grape boiled down to a thick jelly.

any river flowing into the lake near its south-east end, as represented in the maps; we were even within a mile of its western end, and had changed our course to S.W. before we perceived it flowing from the S.S.E. and round the west end of the range of hills, which forms the southern limit of the lake.

Leaving the shores of the lake we crossed a succession of undulating hills, here and there covered with wood, until we descended into the plain watered by the Rhyndacus, and at 3h. 15m. reached Kirmasli, on the banks of the river, which was here called the Tauschanli Chai, and crossed its rapid stream by a long wooden bridge. We dismounted at the khan, and having established ourselves in two small rooms over a stable, were on the point of starting to explore the town, when the Agha sent to inquire who the Frank travellers could be, whose arrival he had witnessed from his konak. Such an unusual event had created a great sensation: and we immediately called upon him with our interpreter, and had no reason to complain of our reception. At least a dozen venerable grey-bearded Turks, attracted by curiosity or for business, were arranged on the divan round the room, the governor sitting in the corner with his back to the light, a diplomatic practice not unusual in Turkey. Standing amongst the other attendants, was a young man in the dress of an officer of the new troops or Nizam, who was a nephew of the Agha; but so strict are the Turkish rules and ceremonies that he stood amongst the servants like a slave, and never ventured to sit down unbidden in the presence of his uncle. While we were smoking our pipes and sipping our coffee, the Agha took the firmahn which I handed to him, and read it aloud for the benefit of his companions. Mashallah and Inshallah resounded on all sides, and when he had finished, he said we were most welcome as friends of the Porte, offered us his horses to see the neighbouring country, and wished us to take up our quarters under his roof. This, however, we declined, thinking we should be more at our ease in the khan, but we

accepted his offer of the horses to see some ruins which he mentioned as being only three or four miles distant, and which we proposed visiting early the next day.

We had hardly returned to the khan, and were sitting down to a humble meal, when a splendid dinner from the Agha's kitchen of twelve or fourteen dishes made its appearance, with the head cook leading the procession, and expecting a handsome present, the usual return for such civilities in a country where the servants seldom receive any other wages.

March 27.—We started at an early hour to see the ruins at Hamamli,* between three and four miles N.W. from Kirmasli. The road led between highly cultivated gardens surrounded with neat hedge-rows and ditches for nearly a mile and a half, beyond which the country was open and neglected. The ruins were at the foot of a steep range of hills to the west of the plain, and consisted of detached pieces of massive walls scattered over a considerable space of ground, covered with fragments of tiles and pottery; there was not enough of any building standing to enable us to form any conjecture as to their original destination, but they probably mark the site of some town or station of Roman or Byzantine times. Connected however with the name of Kirmasli, or as it is sometimes pronounced Girmasli, where we afterwards saw several remains of antiquity, these ruins probably mark the site of Germe or Hiera Germe, as it is called by Ptolemy.† Anna Comnena‡ mentions the Germian mountains as not far from Lopadium, and the hills close by, which stretch down to the north, form the southern boundary of the plain in which Ulubad (Lopadium) is situated. The dis-

* This Hamamli must not be confounded with the Hamamli mentioned by Chishull (Cramer. Asia Minor, vol. i. p. 57), which is on the road from Cyzicus to Susugerli.

† Cramer, vol. i. p. 59.

‡ Ann. Com lib. xv. c. 2.

tance from Kirmasli to Ulubad is only four hours, or twelve miles.

The ruins of Hamamli are almost all of a greenish trachytic or porphyritic rock, the hills to the west consisting of the same materials. We could not, however, ascertain whether the trachyte had risen up through the calcareous marls which surrounded it, or whether these beds had been deposited against the pre-existing igneous rock, although the latter is more probable.

On our return to Kirmasli we took leave of the hospitable Agha. His manners showed that he was above the usual class of Aghas of small towns, and we learnt that his name was Kirketli Jacoub Pacha; he had been Seraskier of Erzeroum at the time of the Russian invasion, and having been unsuccessful in the defence of his province in consequence of the defection of his troops, he was banished to this place as a punishment for his misfortune. He made many inquiries respecting the neighbouring ruins, and on our saying that the rocks were igneous, asked whether there was any chance of finding sulphur there. One old gentleman who was present said that flames were sometimes seen there at night, and began talking very mysteriously about Sheitan. The Agha then gave orders for us to see the interior of the mosque, where, he said, there were some "old stones" with inscriptions. We searched long in vain for them, but on raising the carpet and matting found one broken in two, with the word XAIPETE upon it, and on another a Greek cross. Several large marble blocks, the remains of ancient buildings, were inserted in the walls of the surrounding houses, and in the burial-ground was a column of black or Egyptian granite twelve feet long, while another of variegated marble was placed in the ground close by.

Kirmasli contains about 800 houses, most of which are Turkish; a few belong to Greeks and Armenians. The chief produce of the surrounding country is silk, for the sale of

which a fair is held every Friday; but the mulberry-trees, being repeatedly pollarded, and all the young shoots and branches being constantly cut off, present an ugly, stunted appearance.

The town is built on both sides of the river, immediately below a narrow gorge in the hills which separate the plain of Kirmasli from another above the pass. On leaving the town we crossed these hills into the upper plain, which consisted of two distinct levels, the one near the river, which was the same as that of the plain below, and another forty or fifty feet higher, on a level with the valley of Kavakli, which extended to the west immediately above the pass, and formed terraces on each side of the valley. This upper level had evidently been the bed of the lake, which existed before the water had worn away the opening at Kirmasli, by which it had been drained; and I am convinced that, in this case at least, it would be a great error to attribute these terraces to the successive elevation of the land, as some geologists have done in other cases: higher up the valley we saw other terraces, or portions of the upper level, still attached to the hill-sides, which afforded a good section of the alluvial or lacustrine formation, consisting of beds of fine sand and gravel.

Our course from Kirmasli was nearly S.S.E., up a well-cultivated valley, the sides of which were covered with oak-coppice and small firs, while on the banks of the river were large walnut and plane-trees. Between nine and ten miles from Kirmasli we changed our course to nearly E., at a spot where another river falls into the Rhyndacus from the south, probably one of those from the district of Mysia Abrettene, alluded to by Strabo.* At 5 P.M. we reached Kesterlek, four hours or twelve miles from Kirmasli, a small village of forty or fifty houses; the Agha of which gave

* Strab. lib. xii. c. 8.—Δι' ὧν χωρίων καὶ ὁ Ῥύνδακος ῥεῖ ποταμὸς, τὰς ἀρχὰς ἴσχων ἐκ τῆς Ἀξανίτιδος· προσλαβὼν δὲ καὶ ἐκ τῆς Ἀβρεττηνῆς Μυσίας ἄλλους τε καὶ Μάκεστον ἀπ' Ἀγκύρας τῆς Ἀβασίτιδος.

us a most hospitable reception, ordering the baggage-horses to be unladen at his konak, and a room to be prepared for us in his house. Here we had a specimen of an Agha's absolute authority, in ordering the whips and bridles to be taken away from our Surijis, to prevent their escaping during the night, as the following day was the first of the Kourbam Bairam, a great festival with the Turks.

March 28.—We left Kesterlek at six, and after crossing the Rhyndacus, flowing from the east, ascended a steep and wooded range of hills, on the summit of which were the ruins of a small castle, apparently Byzantine, overhanging the deep and winding valley, and commanding both the river and the pass over the hills. It was probably one of the fortresses built in the tenth or eleventh century, to defend the passes of Olympus against the inroads of the Turks, and which were afterwards neglected during the reigns of John and Manuel Palæologus.* The walls, built of bricks and rough stones, appeared to have been cased with larger blocks, which had been removed. It covered above an acre of ground, and must once have been a place of considerable strength.

Descending from this ridge over hills slightly wooded, we regained the valley of the Rhyndacus, still flowing on our left, and passed through the village of Karaja Kieui, the huts of which were built entirely of logs of wood, and roofed with split boards.† Immediately to the east the river emerged from a deep ravine, in which the serrated forms of the cliffs contrasted with the deep-green of the forests of fir which cover the mountain sides, and extended over several successive ridges to the foot of Mount Olympus, whose snowy heights bore nearly E.N.E. After passing through the orchards and vineyards of the village, we ascended the wooded hills on our left, and continued for

* See notes to Gibbon, cap. lxiv.

† Split, not sawed.

"Nam primi cuneis scindebant fissile lignum."—*Virg. G.* I. 144.

some miles amongst pine-woods, crossing a succession of glens, down each of which a clear stream hurried over its rocky bed to join the river. The scenery on the left was very striking, with the Rhyndacus flowing through a narrow gorge between cliffs of marble, which rose perpendicularly from the water's edge, and had the appearance of having been rent asunder by an earthquake.

At 8h. 5m. we crossed one of the mountain-torrents before mentioned, at a lonely spot, where a patch of soft and mossy turf, enamelled with flowers, was hemmed in by steep and wooded hills on the right, and high limestone cliffs on the left, through which the water had forced a winding passage. These rocks were of crystalline limestone, associated with brown, and slightly micaceous schists. This wild and varied scenery became more Alpine at every step, as we penetrated into the recesses of the mountainous district, which appears to form part of that division of Asia Minor to which Strabo has given the name of Mysia, or Mæonia.

Soon after nine we changed our direction to south, and leaving the valley of the Rhyndacus behind us, ascended rapidly until we reached the summit of the range, whence we obtained a fine view of Mount Olympus, bearing nearly N.E., and towering far above the intervening district of wooded mountain-chains.

The country appeared quite uninhabited; for hours we met neither peasant nor traveller, and the only evidence of the operations of man was to be seen in the charred trunks of the pine-trees. This practice of burning the lower part of the stem is constantly resorted to by the Euruques, who pasture their cattle on these mountains during the summer, in order to extract the resin, which exudes in great abundance from this species of pine, and is an article of considerable commerce at Smyrna. The villagers and country people whom we had met with since leaving Kirmasli were civil and inoffensive; and we felt ourselves in these

wild mountain-passes as safe as in the streets of Constantinople.

The woods became less thick as we ascended, and in many places were large tracts of forest, which had been much injured by the spreading of the fire applied to their roots, by which their picturesque appearance was destroyed. On reaching the summit soon after 11 we saw many large patches of snow on the northern slopes of the hills below us. The rocks here consisted of a hard and close-grained green-stone, decomposing to a reddish-brown, in which were large patches of a more earthy character, probably in a more advanced state of decomposition. The pines were less abundant, and had yielded to junipers, which grew with great luxuriance on this elevated ridge.

After continuing for some miles along the top of the ridge, we commenced our descent about 12, and soon emerged from the pine-forests. At 1 P. M. a broad and well-cultivated valley opened on our right, soon after which we came in sight of the village of Djibeli, about two miles off in the same direction. Near it was a small hill, on the summit of which were the ruins of a castle, which appeared to date from the Lower Empire, although the Greeks called it Genoese.

At 1 h. 30 m. we entered another extensive forest of pines, most of which had suffered from the practice before mentioned. The ground again sloped to the north towards the Rhyndacus, whilst on our right a high chain of mountains of crystalline limestone extended from east to west. Passing through the villages of Dundar Kieui and Bourmah, we found the Turkish inhabitants celebrating the feast of the Kourbam Bairam. Dressed in their best and gayest clothes, the men were collected in large groups outside the village, smoking and indulging in silent meditation, or receiving and returning the salutations of the passers-by; whilst in the village the women, equally gaily dressed, might

be seen flitting from cottage to cottage to indulge in visits and in gossip.

At 3h. 30m. our course became more southerly, and at the village of Kaiyajik we again entered the broad valley of the Rhyndacus flowing from the S.E. The village is built upon a rocky point of white calcareous sandstone, which, resting against the crystalline limestone just mentioned, appeared to be the remains of a lacustrine deposit, formed before the waters of the Rhyndacus burst through the deep gorges below. We here saw for the first time several of the large white vultures* which are numerous in most parts of Asia Minor during the summer, and become horribly tame in the large towns, where they are encouraged by the Turks for their useful qualities as scavengers.

At 4h. 20m. we crossed a small river flowing into the Rhyndacus from the S.W., and after ascending another low range of hills, descended upon a large and neat-looking chiflik or country farm belonging to the Agha of Adranos. On presenting our firmahn, he expressed his delight at seeing us, the first Franks who, to his knowledge, had visited the place. Adranos, he told us, was the name, not of a village, but of the district which he governed, containing about twenty villages, and which in old chronicles was called Ornos. He spoke of several ruins in the neighbourhood, which we determined to visit the following morning, and mentioned one in particular, where, he said, we should find several inscriptions. Amongst others which he described, but which we did not visit, were some hot baths called Kaiya Hamoum, and an old castle three miles off to the west, formerly called Tekia. He showed us also an English thermometer, which he had bought at Constantinople, and on which he had marked different degrees of heat and cold which he had observed. The lowest temperature marked was 5° Fahr., to which point he told us the mercury had sunk during the past winter.

* Probably the Neophron percnopterus,—Sav. (H. E. S.)

The chiflik was a fair specimen of a farm-house or residence of a Turkish country gentleman. We entered by a large court-yard, on each side of which were low buildings and stables for horses and cattle, with a small fountain in the centre. At the further end was the dwelling, where a crazy wooden staircase led to an open gallery, ornamented with carved wood and arabesque paintings, from which three or four rooms opened in different directions; for it is a peculiarity in Turkish architecture, that no two rooms should communicate with each other.* The rooms generally contain two rows of windows, as was the case here; the lower ones square and plain, and intended to be opened; the upper ones smaller, of a horse-shoe shape, filled with stained or painted glass, and always kept closed. The walls were painted with arabesques and landscapes, and the ceilings were richly ornamented.

In his anxiety to show us every attention in his power, the Agha insisted on our dining with him; and our curiosity to see a Turkish dinner got the better of our repugnance to the necessity of eating with our fingers, and dipping them into a greasy dish with those of half-a-dozen grey-bearded Turks. We got through it however tolerably well; some of their dishes, although not delicate, are decidedly savoury, and there was no want of variety. The real objection to a Turkish dinner is the unphilosophical manner in which they mix meats and sweets, pastry and stews. The Turks are enormous devourers of food, and will swallow three or four dinners one after the other without hesitation; but they eat without system or judgment, for the mere sake of eating, and not for the more refined pleasure which the Gourmet of Paris derives from the palatable qualities or agreeable taste of his food.

But enough of Turkish gormandizing. I will only remark how often I was reminded of the observation of

* For a description of the regularity and principles on which Turkish rooms are constructed, see Urquhart's 'Spirit of the East,' vol. ii.

Ascanius to his parent: "*Heus, etiam mensas consumimus.*" It is the usual practice of the Turks to place before each guest a large flat piece of soft bread or biscuit, scarcely baked, and doubled up like a napkin, to be used as a plate, from which he is constantly tearing off small pieces, which are held doubled between the finger and thumb, in order to take up such mouthfuls of cream, or honey, or pilaff, as they are unable to hold between their unassisted fingers.

CHAPTER VI.

Ruins of Hadriani—Inscriptions at Beyjik—Hospitable Reception at Haidar—Harmanjik—Turkish Manners—Eschen—Phrygian Tomb—Tauschanli—Oranjik—reach Azani.

TUESDAY, March 29.—We started at an early hour to see the ruins near the river; but after half-an-hour's ride in an easterly direction we found to our disappointment a low rocky hill, crowned with the ruins of a fortress of considerable size, but of a late period, whilst its sloping sides were covered with remains of small houses and tenements, probably built round the castle for the sake of protection during a period of disturbance, as the burghs of the middle ages sprang up in Europe round the castles of the feudal lords. The castle, which stood on the west or left bank of the Rhyndacus, had been defended by several round towers, most of which, however, were in ruins. Close to the hill were the remains of two bridges, the lowest of which was modern, but the other, built of rough blocks of marble, was probably of the same age as the castle, and consisted of two arches, of which the pier in the middle of the river was still standing. A road, hewn through the limestone rock, led from the old bridge to the S.W., *i.e.* in the direction of Hadriani, thus forming the shortest line of communication between Prusa and Pergamus.

Returning to the konak, we saw several remains of buildings on the hill-side, the tombs perhaps of Hadriani. Some Greek peasants were digging out large flat Roman tiles close to the road; and three or four fragments of columns lying about in the court-yard of the konak were said to have been brought from the ruins in the neighbourhood.

At 9 A.M. we again started from the chiflik, and after travelling nearly two miles in a south-east direction, with a

wooded hill on our left, which supplied the ancient town of Hadriani with marble for its public buildings, we came to the ruins we were in search of. We first reached what appeared to be the ancient gateway, though no other traces of the walls of the town were to be seen. It consisted of three arches, that in the centre being somewhat larger than the others, and the architecture not of a good style. A little farther on we found the remains of a large and massive building, the character of which could not be mistaken, and which, together with the foundations of buildings and fragments of architectural sculpture by which it was surrounded, distinctly marked the site of an ancient city, which, from the resemblance of the modern name of the district, could be no other than Hadriani.

Many attempts have been made to clear the sloping ground of these fragments, for the purpose of cultivation. Broken columns and large blocks of cornices, beautifully executed, have been thus heaped together round the larger masses of ruins, which are overgrown with vegetation. But the large edifice mentioned above appears to have been a gymnasium; the foundations are visible all round, and prove it to have been a parallelogram, measuring 88 paces by 65. But, with the exception of the greater part of the S.W. side, the wall does not stand more than three or four feet above the ground, and even that is much concealed by underwood. To the S.W., however, it is nearly thirty feet high, and is seen by the traveller at a considerable distance. It is beautifully built, in straight courses of white marble, varying in height from one to four feet. The thickness of the wall itself is only three feet; which, as it is built without cement, is a proof of the care with which the blocks must have been smoothed and fitted. The foundations of interior walls are also visible, as well as several small apartments or cellæ; also, near the centre of the space, a large block of marble, nearly four feet square, with two holes drilled in it, like sockets for the pivot of a door.

Besides this building are the foundations of two others,

which, to judge from the broken shafts of columns lying near them, appeared to have been temples; the style of one was Doric, of the other Ionic, and many beautiful specimens of cornices with the echinus and acanthus patterns were also there. At one of these, three small columns in a line, and apparently *in situ*, probably mark the site of a portico; while numerous broken shafts of columns have been built into the walls of the surrounding fields. There were no inscriptions here, but in the neighbouring village of Beyjik we found several on the wall of the mosque, which were all Greek, though some appeared to be of a late period; one on a broken pillar must have supported a statue dedicated to Ælius Verus, the adopted son of Hadrian.*

The curiosity of the inhabitants, who had never seen a Frank before, delayed us while copying these inscriptions; for, in consequence of the Bairam, the whole population was idle, and crowded round us. The Turks always fancy that ancient inscriptions are connected with concealed treasures, and that by reading them Franks are enabled to discover where these are hidden. Scarcely a ruin exists in Asia Minor with which some marvellous tale of concealed wonders and treasures is not connected, and hence the frequent jealousy of the natives. This feeling is, however, generally removed by an unreserved explanation of the meaning of the inscriptions.

The town of Hadriani is interesting as being the birthplace of Aristides, the rhetorician, who flourished in the second century, and gives some account of its geographical position, which, it may be observed, is far removed from the sources of the Rhyndacus.†

We started from Beyjik about noon, and ascending a range of hills of blue crystalline limestone, interstratified with soft micaceous sandstone and shale, continued for several hours over an undulating country, partly covered with

* See Appendix, Nos. 1—4.

† Cramer, vol. i. 179. Arist. Orat., tom. i. p. 596. Socrat. Eccl. Hist. vii. 25. Hierocl. Synecd. p. 693. Sestini, Lettere Numism. tom. viii. p. 14, 16.

juniper, dwarf ilex, and a few scattered oaks. As we advanced, however, our road led through extensive oak-coppices and fir-woods. A deep valley on our left several miles off proved to be that of the Rhyndacus, flowing between perpendicular cliffs of white cretaceous limestone, the horizontal stratification of which was very distinctly marked; and in which Mr. Strickland discovered some freshwater tertiary shells, and layers and nodules of flint, resembling those found near Smyrna.

At 3h. 45m. we reached Ahadj Hissar, the wretched appearance of which induced us to listen to the recommendations of the inhabitants not to stop there, but to proceed to another village two hours farther on. Descending to the bed of the river on the east, we passed the ruins of a castle built upon a steep and insulated rock, overhanging the river and commanding the pass. Another existed a few miles lower down, by which our road would have been shortened, but the Agha of Adranos had desired our guides to bring us here, in order that we might see the castle. The course of the Rhyndacus was almost from S. to N., winding along the bottom of a narrow valley, in which it is confined by hills of cretaceous limestone, of lacustrine origin. It is therefore evident, from this and former observations on the formations through which the Rhyndacus flows, that its valley must have represented in former times a chain of lakes, in each of which a lacustrine formation was deposited, which existed until the accumulation of water, or the convulsion of an earthquake, broke down their temporary barriers. The river was here called the Gieuk Sú,* and did not appear much less than at Kirmasli. After crossing it by a wooden bridge, we ascended hills of white limestone for nearly two miles to the small village of Haidar, built almost entirely of wood, where we were lodged in the travellers' Oda, a dirty hut over a stable, and the refuge of

* A very universal term applied to rivers, signifying water derived from the sky or heaven, or atmosphere.

all wanderers, rich or poor. Here we were most hospitably entertained by the villagers, one of whom brought wood, another carpets, another cushions; and after some time a profusion of dishes for dinner, consisting of soups, stewed mutton, vegetables, rice, and sherbets, which, when we had satisfied our appetites, afforded a repast to the bystanders. Their hospitality, however, was rather troublesome, for every man in the village seemed to think he had a right to come and stare at us, smoke our tobacco, and crowd our apartment; which they did for several hours with provoking perseverance, although the only conversation was carried on through an interpreter. Yet, notwithstanding their humble rank, their dignified manners would not have disgraced a palace; this natural ease is one of the most peculiar features of the character of the Turkish peasant. They complained of the new registration then in progress throughout Anatolia by order of the Sultan, and could not understand or approve of his sending round persons to take an inventory of their property, their lands, their wives, and their flocks.

March 30.—On a broken column near the mosque was an imperfect Greek inscription, which we copied before starting. It appeared to have been sepulchral, and perhaps came from Hadriani. Soon after seven we took leave of our hospitable hosts, who said that fate had brought us to their village, God having intended that we should eat of their bread. About four miles S. by E. from Haidar we again reached the Rhyndacus, and, crossing it by a wooden bridge, ascended for nearly two miles the narrow valley, through which it flows from the east. Its banks were thickly studded with trees, chiefly oaks and planes, and on the steep rocks on the right bank we observed several deep caverns. Leaving this valley, we ascended the low hills to the south, having on our right a rocky gorge, with a stream flowing towards the Rhyndacus, beyond which the scenery was highly picturesque; and the grouping of hanging

woods and cliffs produced a singular and striking effect, chiefly caused by a succession of abruptly broken plateaux or table-lands.

After crossing a small but well-cultivated plain, in which the ground had been cleared by carefully collecting the stones into heaps, we reached the konak of the Agha of Harmanjik* about 11 A.M., and after going through the usual ceremony of pipes and coffee, and having our firmahn read out from beginning to end by the Cadi in the Agha's reception-room, we learnt that there were no horses in the village, and were compelled to wait until they should return from the mountains, whither they were gone in search of wood.

During this delay I remained in the Agha's salamlik watching the progress of public business, highly interested with the appearance of bold independence and the dignified manner of all around me, as well as with the perfect silence in which the whole was conducted. But what struck me most was the grace and dignity of the peasants who came in to pay taxes, or procure a Teskeray, or make some small present to the Agha, who was at the same time their landlord, or, as was the case with some, merely to kiss his hand. This ceremony was performed in a peculiar and impressive manner; the inferior takes the right hand of his master between both his own, bowing low at the same time, after which he slowly strokes his beard with both his hands, whilst the superior merely touches his own with the hand that has been embraced. One man particularly attracted my attention; he was a fine athletic figure, and advanced towards the Agha's secretary with great dignity as he presented his petition, accompanied with a gift rolled

* Harmanjik is the chief place of the canton, or kazéh, and the residence of the agha. A kazéh contains from ten to twenty villages; each village is under the superintendence of a muchtar, or chiayah: formerly the latter term was universally applied. He is generally one of the oldest men of the village, chosen by themselves, invested with great power and responsibility, and has the management of all the public affairs of the place.

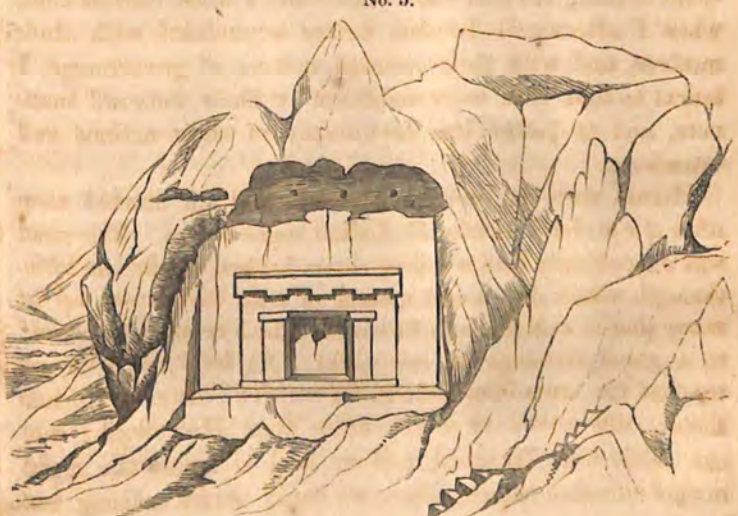
up in paper, containing sugar, coffee, pepper, or some such trifle; then retreating backwards until he reached the centre of the room, he quietly assumed a most dignified attitude, with his right foot a little advanced, whilst both his hands rested upon his broad red sash. Although I understood not a word of the speech which he then delivered, I felt that no Young or Kemble, with their most studied arts, ever came near the natural dignity and carriage of this illiterate peasant. In broad contrast with this man's appearance was that of a feeble old man, the picture of misery, in rags and tatters, who was sitting on the floor beside him. When he afterwards arose to make his salutation to the chief, the proud Agha himself half rose from his seat to receive his welcome, and to spare him the trouble and fatigue of stooping. It was a touching instance of respect paid to old age; and the whole scene was well calculated to impress upon a stranger a favourable idea (as far at least as externals went) of the manners and feelings of the Turks. I was also much struck with the ease and publicity with which their business was transacted, and their courteous bearing towards each other; but I must confess that, when I afterwards became better acquainted with their motives, and with their corrupt system of government, I learnt to look with more suspicion on their outward manners, and to judge less favourably of their actions and intentions.

Horses were at length obtained, and we started soon after 2 P.M. for Tauschanli, distant eight hours. The road was exceedingly bad, winding over broken sandstone hills, through which dykes and masses of trap had burst up in many places, and through fir woods, which seemed to extend to a great distance on our right. At half-past four we reached the travellers' Oda in the wooden village of Eschen Kieui, only seven or eight miles from Harmanjik; but our cattle were fatigued, and we had to spend the night in this elevated region, where we could obtain nothing but

milk and eggs. Here, for the first time, I saw one of those beautiful dogs called Persian greyhounds, going about wrapped in body-clothes.

Thursday, March 31.—A heavy storm of snow, sleet, and rain accompanied us for above an hour from Eschen Kieui, over hills covered with oak-coppice. After nearly six miles travelling over a hilly, wooded country, we reached the summit of the ridge, which consisted of trap and greenstone, and soon found ourselves upon a vast formation of volcanic sandstone or peperite, in colour almost white, and sometimes crystalline, containing many crystals of hornblende, and resembling the volcanic tuff of other parts of Asia Minor. As we descended the valley, we discovered a curious sepulchral monument excavated in the tufaceous rock, near the road side. It bore a rude resemblance to the tombs on the southern coast, but has been much less elaborately finished, and consisted of an upright façade of rock, surmounted by a pointed pediment, having in front a square recess, carved in imitation of a doorway, as represented in the accompanying woodcut. One of the pannels of the

No. 5.



[*Phrygian Tomb near Tauschanli.*]

fictitious door has been broken through, by which we saw, what would otherwise have escaped our notice, that the real entrance to the tomb was from a now inaccessible opening near the summit of the rock, above thirty feet from the ground. The whole height of the sculptured rock was above fifty feet, and the monument itself twenty-one feet wide. Several similar tombs appeared amongst the neighbouring rocks, but none so large or perfect as the one in question. We could not, however, hear of the existence of any ruins in the neighbourhood, of which this might have been the Necropolis.

A winding road down the narrow valley, closely hemmed in by volcanic rocks, brought us in about an hour to the wide plain of Tauschanli, which is also watered, and at times inundated, by the Rhyndacus. The plain is said to derive its name from the hares (Tauschan) which abound in it, and is traversed by an excellent road fit for carriages. About a mile before reaching Tauschanli we passed the small town of Mohimoul on our left, situated on a rising hill of white marl capped with a horizontal bed of silicious ferruginous jasper. Two lofty minarets gave the town a picturesque appearance, below which was a large fountain, near the road-side, with many marble fragments of ancient architecture, and amongst them several inscriptions; but none of any peculiar interest.* The fountain contained some large fish, which, according to the Turkish legend of the place, always jump out of the cauldron if any impious mortal dare attempt to cook them. The Greeks of Balukli, near Constantinople, told a similar story, with the additional fact, that the same identical fish have lived in the fountain ever since the Turks took possession of Constantinople. The existence of some ancient town, not far from hence, is proved by the numerous sepulchral monuments which we saw at the fountains and corners of the streets in Tauschanli. They are all of a form peculiar to Phrygia and the neighbouring districts, consisting of two pannels or

* See Appendix, Nos. 5 and 6.

compartments, sunk in the centre, which is intended to represent a doorway, surmounted by a circular arch, or a pediment resting upon an architrave, on the face of which the inscription is generally written.* It is possible that they may have been brought from Azani, although the distance (nearly twenty-four miles, over a very hilly country) would make it a work of great difficulty; and with all the eagerness which the Turks have ever shown to spoil ancient ruins, in order to adorn their modern towns and fountains, or in consequence of finding blocks ready cut for their purpose, I am not aware that, except along the sea-coast, they have ever transported these heavy materials to any great distance. I am therefore inclined to think that these monuments point out the existence of some town of Mysia Abbaïtis, Abrettene, or Phrygia Epictetus, in this neighbourhood. The flat hill itself, with its steep sides rising in the middle of a rich and fertile plain, looked like an acropolis; but we were told there were no ruins near, and our time would not admit of our exploring the surrounding country, without some better data to proceed on.†

Friday, April 1.—I obtained a few coins here from the Armenians, but none of any value. Soon after eight, A.M., we started for Azani, distant eight hours. Three miles south of Tauschanli we left the plain, and soon after the Rhyndacus, winding away to some distance on our left; and began ascending a steep mountain, in the upper part of which trap-dykes have burst through crystalline limestone and yellow schist, traversed by numerous veins of quartz. The hill sides were covered with a luxuriant growth of gum-cistus, while their summits were clothed with remains of primæval pine forests. Twelve miles from Tauschanli we left this elevated region, and descended to the little valley of Gozuljah, and after crossing a small

* See Appendix, No. 7.

† We were told of the following road from hence to Balukhissar:—Tauschanli to Bolat, a small town, 18 hours. Pass a town called Kefsût; then cross the Bogaditza Chai, leaving Bogaditza on the left. Bolat to Balukhissar, 18 hours.

stream flowing eastwards into the Rhyndacus, found ourselves upon an extensive formation of white cretaceous limestone, containing nodules and tabular veins of flint, where the scenery for many miles resembled that of the chalk districts in England. The sides of the valleys were covered with a scanty verdure of juniper and dwarf spreading cypresses, and in the dry bottoms were a few attempts at cultivation; but in general nothing could exceed the wearisome sterility of the country for nearly seven miles, when, after crossing a ridge of crystalline marble, we descended upon Oranjik, situated at the north-west end of the plain of Azani. This plain, which lay below us like a yellow lake, without a tree to vary its surface or to break its uniformity, and which is completely surrounded by hills, is evidently the ancient Azanitis, and bears strong evidence of having been a lake in former times. The gently undulating hills in the centre and near its southern border, consist of white lacustrine limestone, containing casts and impressions of limnea, planorbis, helix, and paludina.

Oranjik is five miles from the small village of Tchavdour, or Tchavdour Hissar, which latter, being situated amongst the ruins of Azani, we preferred making our halting-place. Our surijis, however, refused to proceed; and, notwithstanding the express orders of the Agha, began unloading the baggage-horses before the konak. His anger was fairly roused at this act of disobedience, and sending down some of his attendants to replace the loads, he had the horses led into his own yard until we were ready to start, when the surijis were obliged to go on with us.

Before reaching Azani we crossed several small streams, all of which flow N.E. to join the Rhyndacus. These are the same streams which Major Keppel also crossed on his road from Tchavdour to Oranjik, and which he mistook for different portions of the Rhyndacus itself. Over one of them was a bridge, formed of three long slabs of sculptured marble from Azani, apparently architraves, supported by others on each side.

As we approached the village we came in sight of the graceful Ionic temple, one of the most perfect now existing in Asia Minor. The account of these ruins published by Major Keppel is so full and satisfactory that I shall not dwell long upon them, merely observing that they are on the left, and not on the right bank of the Rhyndacus. Our lodgings were wretchedly bad; yet, notwithstanding the lateness of the hour, the villagers soon brought us a subscription dinner consisting of three loaves of bread, three soups, and three omelets,—fortunately we were not quite dependent upon them for our meal.

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CHAPTER VII.

Ruins of Azani—Road to Ghiediz—Basaltic Rocks—Position of Cadi—Cross the Hermus—Road to Ushak—Turkey Carpets.

SATURDAY, April 2.—This day was spent in visiting the ruins, copying inscriptions, and collecting coins from the peasants; of these the majority were Byzantine, but I obtained several belonging to the Imperial series, as well as some autonomous, the legend being either ΔHMOC, IEPA BOΥΛH, or IEPACΥNKΛHTOC AIZANEITΩN, or AIZANITΩN. One beautiful and rare small brass coin represented a head of Jupiter Serapis; on the reverse was an eagle with its wings half extended, with the word AIZANEITΩN. The Imperial coins were of Augustus, Faustina, Claudius, Domitian, Caius, and Gallienus. I should observe, however, that I did not procure all these at Tchavdour Hissar itself, but at different places in the surrounding country.

Close to our cottage we found the substructions of an extensive building of huge blocks put together without cement, which was perhaps a gymnasium. It appeared to stand upon a rising ground, but this may have been only the effect of the fallen ruins, which had so buried the foundations, that without much excavation it would be impossible to make a plan of them. The two Roman bridges over the river form the only means of communication between the two banks.

It is a remarkable circumstance that no traces of walls can be seen any where round the town; and from the manner in which the ruins are preserved, it probably never had any. The theatre is situated nearly half a mile from the temple, on the slope of a hill facing south by west. The cavea is remarkably well preserved; the scena and prosce-

nium not so well, but enough to give a good idea of a Grecian theatre; whilst the whole of the orchestra and interior of the cavea are filled with broken fragments of fluted columns, rich cornices and architraves, and bas-reliefs of rather ordinary execution. A stagnant pool of water in the centre speaks forcibly as to its utter abandonment and desolation. The stadium extends north and south in a direct line of prolongation from the theatre, with which it is immediately connected, although at a lower level. Some of the marble seats, both in the stadium and in the theatre, are well preserved, and of highly-finished workmanship; but the proscenium and scena are built of a different stone, and in a ruder style. Looking at the theatre from the stadium we were struck with the similarity of the construction of the latter and the cavea, forming as it were a perfect whole, while the proscenium and scena appeared to be the work of a different period, perhaps only temporarily erected, to be removed on certain occasions, and hastily rebuilt for dramatic exhibitions. On the outside wall of the west wing of the cavea several letters were cut upon some of the marble blocks, such as Δ. H. K. ΔH., which were probably nothing but marks to guide the workmen in placing the different blocks.

The hill above the theatre is covered with numerous fragments of sarcophagi, all of which have been opened, and their covers thrown aside. It is a remarkable fact, which I frequently observed, that, whereas both in Greece and Italy unopened ancient tombs are frequently discovered, in Asia Minor they have been universally opened and pillaged, probably many centuries ago; but whether this should be attributed to the different characters of the inhabitants or of the tombs, this is not the place to inquire.

The Turkish burial-ground was also full of ancient fragments, on many of which were inscriptions, chiefly sepulchral, and more or less perfect; many are also inserted into the modern walls forming the enclosures of fields around the

town, one of which appears to be an interesting fragment of a letter from Nero, dated Rome, which, from its resemblance to those upon the walls of the great temple, probably formed a part of the public documents, which, according to the custom of the times, were engraved for the benefit of the public upon that building. Several of these inscriptions are given in the Appendix.*

Sunday, April 3.—We started from Azani for Ghiediz, said to be eight hours, which, according to the usual computation, would give twenty-two or twenty-four miles. It appears, however, after carefully laying down the route according to the plan which I have already explained, that on the map there is only a distance of fourteen miles in a straight line S.S.W. This discrepancy will account for the extreme inaccuracy of the maps, and the difficulty, and sometimes even impossibility, of reconciling the positions of different towns upon them, when they have been constructed upon such vague and uncertain data as Turkish computation by hours.

We left Azani soon after 7 A.M., and for nearly two miles proceeded in a S. by W. direction along the plain, having the Rhyndacus on our right, flowing through a narrow and steep gorge in the calcareous rock. About a mile and a half from the town I copied the inscription No. 20, on a broken column. On leaving the plain, our road led for several miles over low undulating hills, and a bleak and barren country, enlivened only by a few scattered juniper bushes and dwarf spreading cypresses. Five miles from Azani we reached an elevated plain, on which many patches of snow were still lying, and crossed several small streams flowing to the right, and presently a much larger one, evidently the main branch of the Rhyndacus, flowing N.W. by W. Large herds of small compact cattle were grazing on this elevated ground, which, when three or four years old, fetch from 140 to 160 piastres, about thirty shillings at the then rate of exchange.

* See Appendix, Nos. 8 to 19.

A range of steep and wooded mountains rises abruptly from the plain to the south, extending almost due E. and W. To the S.W. many of the summits were still capped with snow, particularly one which I afterwards ascertained to be Morad Dagh, the ancient Dindymene. The many streams, which descend from these hills and unite in this marshy plain, may be considered as the sources of the Rhyndacus.

In three hours and a half from Azani we reached the foot of the mountains, and entered a deep valley watered by a stream now much increased by the melting of the snow. The steep sides were covered with pines, and higher up with a thick underwood of gum-cistus, which had suffered much from the frosts of the last winter. These hills, which consist of schistose and metamorphic rocks, rise to a great height, and form the water-shed between the Hermus and the Rhyndacus, extending from Morad Dagh to Ak Dagh, near Simaul; and, as I ascertained on a subsequent journey, join the range of Demirji, being a part of the great central axis of Asia Minor, which may be said to extend from S.E. by E. to N.W. by W. from the Taurus by Sultan Dagh to Mount Ida, forming the great water-shed between the rivers which fall into the Mediterranean and the Archipelago, and those which fall into the Sea of Marmora and the Black Sea. I think it may also be shown that most, if not all, the great trachytic outbursts which preceded the tertiary period occurred on this line. The more recent basaltic eruptions of the Catacecaumene appear to have been owing to later agencies.

A short mile brought us to the summit of the pass. The ground was covered with pines and oak coppice, and we soon reached a small stream flowing to the south towards a broad valley far below us, extending to the foot of the snowy range of Morad Dagh, which was watered by a considerable river. In our descent we observed trachytic and basaltic rocks bursting forth in several places, and I again remarked the striking difference, in point of fertility and vegetation, between the northern and

southern slopes of the mountains. Those facing the south are universally rocky and barren, in consequence of their extreme dryness and the absence of springs, whereas those to the north are generally covered with rich mossy verdure and a luxuriant vegetation. This is probably owing to the more gradual melting of the snow towards the north, which keeps the ground moist for a longer period, whilst the southern slopes are rapidly dried up.

Near Ghiediz the land had the appearance of having been formerly cultivated and divided by hedge-rows: these are now entirely neglected, and the soil abandoned; this however is naturally sterile, and, where not volcanic, consists of lacustrine limestone. A sudden turn in the road soon brought us in sight of the picturesque town, situated immediately below us, in a deep hollow surrounded by precipitous hills, and intersected by a small but rapid river, which escapes by a narrow gorge, not at first apparent. On the eastern side the town is hemmed in by lofty volcanic rocks, extending from north to south in a semicircular form, whose sombre tints give additional obscurity to the dark and filthy streets. To the N.E. of the town a stream of columnar basalt has run down to the N.W. from the basalt above mentioned, flowing over beds of gravel, sands, and marl, in which were a few soft, broken, bivalve shells, apparently of the genus Unio. The stream of lava, having reached the bottom of the valley, crossed the bed of the river, but has been subsequently worn away, so as to afford a passage to the water. This is the spot which, in consequence of the solid basaltic foundation, had been chosen by the Turks for the bridge, on the wall of which are placed the inscription referring to the Mysi Abbaïtes, and the headless figures mentioned by Keppel. We wandered for some time through the town in search of antiquities, but only saw a few blocks of marble. The mosque mentioned by that traveller is decidedly Turkish, and the stones of it did not appear to us to have been derived from any ruined Hellenic building. Throughout Asia Minor are many mosques, tur-

béhs (monuments), and shrines, built at different times, but particularly in those of the Seljukian Sultans, the masonry of which is equal, if not indeed superior, to that of the mosque of Ghiediz.

We afterwards ascended the high basaltic rock which forms the southern end of the ridge on the east, and found that the river, instead of flowing over the low ridge which crosses the valley below the town,* has forced its way through a narrow chasm, in the basaltic rock, which appears to have been the focus of an eruption, the perpendicular sides of which were at least 200 feet deep. Looking down from this commanding spot, all the houses are seen to be flat-roofed, and on each roof is a marble roller, generally part of an ancient column, for the purpose of keeping the earth, of which it is formed, hard and water-tight. The houses are all built of mud, so that at a distance the town would not be distinguished from the surrounding parched and dried-up ground, except for the four white and graceful minarets which adorn it.

April 4.—We were delayed this morning for want of horses, in consequence of the intractability of the Menzilji, and learnt that the person to whom we had applied yesterday had been superseded by a new governor just arrived. Hence, perhaps, his incivility, since, being no longer in office, he did not care for our firmahn. I often observed that, on thanking an Agha or Mutzellim for his courtesy and hospitality, he has replied that "he had only obeyed the orders of the Padischah," "that I was recommended by the Padischah," or words to that effect, thereby implying that, had he been independent, he would not have shown so much civility to an infidel.

On sending to the new Agha, our difficulties were removed, and we left Ghiediz at 9 for Ushak, ten hours distant. A few coins were brought me here, but the prices asked were extravagantly high.

Leaving the town, we descended the valley to the

* Very possibly a moraine according to Agassiz?

S.S.E. on the right bank of the river of Ghiediz for two miles; and after crossing it we continued two miles farther due south, until we entered a broad flat valley extending from east to west. Through this valley flows a very considerable river, which we forded with some difficulty, and into which the Ghiediz river falls about a mile below the ford. This river rises at the foot of Morad Dagh, to the east; it is here called the Morad Daghi Sú; and is unquestionably the real Hermus rather than the Ghiediz Chai. This fact may reconcile the discrepancy which appeared to exist between the accounts of Pliny* and Strabo† respecting the sources of the Hermus, on the supposition that Ak Dagh, between Ghiediz and Simaul, was Mount Dindymene. The latter states that this river rises from the sacred mountain of Dindymene, while Pliny says that it rose "juxta Dorilæum." Now, although Dorilæum is on the other side of Morad Dagh, still the fact of placing the sources of the Hermus upwards of thirty miles more to the east brings them also more "towards" Dorilæum, which may be the full amount of Pliny's meaning, while the river rises at the foot of Dindymene or Morad Dagh.

I do not attach any consequence to the argument which has been brought forward, that, as the river Hermus is represented on the coins of Cadi, which is supposed to have been at Ghiediz, the small river which passes through that town must be the Hermus; because, even if Cadi were at Ghiediz, this would still be the principal river in the neighbourhood; and, being in fact only five miles off, the celebrity of its name was a sufficient reason for the Cadoenians to put it on their coins. Besides, the names both of the Hermus and the Hyllus occur upon the coins of Saittæ, a town which I discovered the following year, situated at a still greater distance from either of these rivers. But it is probable that the site of Cadi was not at Ghiediz (where hardly any ancient remains exist), but higher up the Hermus, above where we crossed it, and near the foot of Morad Dagh. We

* Plin., Hist. Nat., lib. v. cap. 29. † Strab., lib. xii. p. 626.

heard of a village in this direction, named Ghieukler, where ruins are said to be standing eight or ten feet high, including an "eski kilisseh," or old church, a term very often applied to Hellenic temples.

There remains but one other objection to answer. Why have the Turks given the name of Ghiediz Chai to the Hermus nearer the sea if it does not flow through Ghiediz? The Turks themselves knew nothing of the ancient name, and they probably gave this name to the whole river, because Ghiediz really stands upon one of its tributaries, and was the only town they knew of near its sources. The inaccuracy of the Turks respecting names of rivers is proverbial, the same river changing its name repeatedly during its course, according to the different towns or districts through which it flows.

Having forded the Hermus, we ascended a small lateral valley, and at 10h. 45m. passed near the village of Erdomous on our left, six miles south of Ghiediz. From hence we crossed a succession of hills covered with pine and oak, and offering magnificent views and scenery in every direction, particularly towards the east. As we ascended, the hills were more thickly covered with gum-cistus, the sun shone in unclouded splendour, and the air was filled with the aromatic perfume of the pines and cistus. At 12h. 57m. we reached the summit of the ridge, from whence the prospect opened to the S.W. Here many trachytic and igneous rocks rose above the surface, the outburst of which probably caused the anticlinal dip of the sandstone which we observed between Ghiediz and Ushak. Amongst these rocks were some beautiful varieties of white obsidian and pitchstone near a stream of trachytic lava.

A short way before reaching the village of Guneh, near the summit of the ridge, the beauty of some specimens of obsidian tempted Mr. Strickland and myself to loiter behind, in consequence of which we lost our way, and found no one to assist us in our distress. We followed the principal road through the village, but it led us back due north; we

therefore returned to the village, and, placing ourselves on the point of a promontory, began firing pistols, in the hope of attracting the attention of some one, either friend or foe. But our efforts were long in vain. The men of the village were at work in the fields, and the women would not venture to come near us. At length a long-robed Turk appeared, probably the Imaum or the Hodja (schoolmaster) of the village, who, after we had made him understand that we wished to go to Ushak, goodnaturedly led us out of the village, and put us on the right track, which led by a winding path into a deep valley on the south, where, after a little delay, we found our people halting for us, and under no slight apprehension as to what had happened.

After crossing this valley, our road led over successive ridges of the same sandstone formation for nearly two hours, where the oaks and pines had disappeared, and the hills were covered with the aromatic gum-cistus. At length we reached the summit of the highest ridge, about four miles and a half south of Guneh Kieui, where a scene of great beauty suddenly burst upon us. Far below, to the south and west, were several distant plains, bounded by snow-capped hills and towering peaks; whilst nearer, and towards the east, the hills were lighted up by the setting sun. About twenty miles off to the S.W. a high range of black volcanic-looking hills presented a striking contrast to the mountains on our left; at first they appeared to be a part of the Catacecaumene, but we afterwards ascertained that, although trachytic, they were distinct from that district, and to the east of Takmak.

Ushak was seven or eight miles a-head of us, due south, but our horses were so knocked up with the heat of the day and the hilly road that we were obliged to halt at the village of Sorkoun, three miles short of Ushak. Here we were wretchedly accommodated, and could obtain nothing but bread and hard eggs swimming in a mess of honey and vinegar.

April 5.—A ride of an hour and a quarter down a rich

and well-cultivated valley brought us to Ushak, celebrated for its carpets. Like most of the central towns of Asia Minor, the houses were built of mud or sun-dried lumps of clay, like Babylonian or Egyptian bricks, with plenty of straw in them. The khan at which we halted was filled with bales of carpets, ready packed for the Smyrna market. The manufacture of these, together with the necessary dyeing of the wool, forms the chief occupation of the inhabitants of Ushak. The dyes of Asia Minor are celebrated for their vividness and durability, particularly the red of madder, and the green from the berries of the tchekeri, which grows in great abundance near Cæsarea and Angora, and are called by the merchants of Smyrna yellow berries.

On expressing a wish to witness the process of making carpets, we were at first told that it would be attended with some difficulty, as they are entirely made by women; but after some time, an old man was found who agreed to admit us after the women had been sent out of the way. The machinery is very rude and simple, and fully accounts for the difficulty which, according to the Smyrna merchants, exists in executing orders exactly; as it is impossible, on fixing the loom, to tell the exact breadth to which the carpet may stretch in the making. On entering a court-yard we saw a large coarse frame, fixed under an open shed, which served as a loom; the horizontal beams of the frame are much longer than the upright, and to them the threads of the warp are fastened, being rolled round the upper one, and let out as required, when the finished part of the carpet is wound round the lower beam. These long threads are then separated alternately by rude machinery, and the coloured worsteds, which are lying by in large round balls, are tied by a peculiar kind of double knot to each two threads, according to the pattern, which is left entirely to the memory of the worker. After each row of these knots three strong transverse threads of the woof are passed by hand in and out alternately between those of the warp; the whole is then beaten and pressed together by a heavy bent wooden comb, resembling the

fingers of the hand. The ends of the knots are first cut off with a large knife, and the whole is afterwards sheared and made even with a large pair of scissors. Each woman works a breadth of from four to five feet; consequently four or five women would work simultaneously at a carpet twenty feet wide.

The inscriptions which, with other marble blocks, have been built into the wall of a mosque near the khan, have been copied by Arundel. At a fountain we saw a large and handsome sarcophagus used as a reservoir for water, on which were represented three Cupids supporting a wreath. Having been informed that all these marble fragments had been brought from Ahat Kieui, a small village six hours off on the road to Sandukli, and that there were many remains still there, we determined to start in that direction.

CHAPTER VIII.

Plain of Ushak—Inscriptions at Chorek Kieui—Cross the Banas Chai—Ahat Kieui Ancient Ruins—Road to Segicler—Conduct of the Peasants—Inscriptions—Cross extensive plain to Gobek—Remarkable Scenery.

LEAVING Ushak at half-past one, we soon found ourselves in a rich plain, in which opium is grown in considerable quantities, as is indeed the case the whole way to Afiom Karahissar, the road to which passes a little to the north of Ahat Kieui. To the north, the plain, about three miles wide, was bounded by the range of high hills from which we had descended, while another low range formed its boundary to the south. This stream, which we observed on our right, evidently falls into the Banas Chai, a considerable river, rising at the south-west foot of Morad Dagh, and which we crossed four hours further; for we observed it some time after bending away towards the south-east. This will considerably alter the supposed hydrography of this plain, which belongs to the water district or basin of the Mæander, and not to that of the Hermus.

Four miles from Ushak, our course still due east, we passed through the ruined village of Iki Serai, beyond which was a Turkish burial-ground, containing a few fragments of ancient sculpture. In the village of Chorek Kieui, seven miles from Ushak, we had the good fortune to discover in the wall of the mosque two inscriptions,* one of which had the words ΗΤΡΑΙΑΝΟΠΟΛΕΙΤΩΝΠΟΛΙΣ. Of this city of Trajanopolis, no traces, except its coins, which are extremely rare, have yet been discovered, and the inscription refers to a monument erected in honour of the Em-

* See Appendix, Nos. 22 and 23.

peror who founded and gave his name to the city. The other document was on a tablet of similar form, erected in honour of the Emperors Marcus Aurelius Antoninus, and Lucius Aurelius Verus, by the city, the name of which, however, is omitted. This latter inscription has the date of the year 251 (ΣΝΑ); but it is not easy to ascertain the epoch here employed. Marcus Aurelius and Lucius Verus succeeded Antoninus Pius in the year A.D. 161. It cannot therefore be the era of the battle of Actium, though this was in very general use under the Roman Emperors. This battle took place in the year B.C. 31, which would make the year of the accession of these two emperors 192 after the battle of Actium. But we can bring the time to which this epoch alludes within closer limits: for amongst the epithets of Marcus Aurelius Antoninus are those of Armeniacus and Parthicus, and amongst those of Lucius Verus, Armeniacus and Medicus.* Now the Parthian war began A.D. 162, and lasted three years. The inscription was therefore written after the year A.D. 165, and must refer to a year between A.D. 166 and A.D. 170, the last being that of the death of Lucius Verus. This would make the year of the epoch fall within the period between 85 and 81 B.C.; but we have no knowledge of any event which occurred between these years so remarkable as to constitute an epoch. Five years later, however, an event occurred which changed the character of the hold the Romans had upon the East, and, by giving to that people a more legitimate claim to their conquests and possessions in Asia Minor, led the way to their final conquest. In the year 75 B.C. Nicomedes IV. bequeathed the kingdom of Bithynia and all his possessions to the Roman people. No other period more likely to have been adopted by the Roman governments of Asia Minor, as the date from whence to commence the period of their rule over that country; in which case the year 251 would correspond with A.D. 176. It is true that this was subsequent to the death of Lucius Verus, but it was still during the reign of M. Aurelius Antoninus, and the inscription may have

been attached to an edifice or triumphal monument commenced during the reign of the two emperors, but completed some years later, to which the date would refer. It is, however, possible that the epoch in question was the conquest of this part of Asia Minor by the Romans, prior to the bequest of Nicomedes; of which conquest a Roman municipality would endeavour to preserve the recollection.

The discovery of these inscriptions increased our expectations of what we might find at Ahat Kieui; for as we had been told that all the antiquities at Ushak had been brought from thence, it was still more probable that those at an intermediate place were derived from the same source, and that this could be no other than the ruins of Trajanopolis.

A few miles further we crossed a wide and much frequented road, which we were told was one of the principal caravan roads from Constantinople to Damascus; but this appears impossible, as its direction was from N.E. to S.W. Looking at that line upon the map, and also at the direction of the caravan roads, which we crossed between Göbek and Tacmac, and also between Koula and Demirji Kieui, there can be little doubt that it is the great road between Kutahiyah and Smyrna, by way of Philadelphia or Allah Sheher.* It has only occurred to me since I have constructed the map, that this must be the line of the Roman road from Cotiæum to Philadelphia, on which stood Acmonia and Aludda, both of which towns would probably be discovered by following it; for I do not believe, though Rennell asserts it on the authority of Seetzen, that the ruins at Ahat Kieui are those of Acmonia.

Eleven miles from Ushak we reached some low hills, scantily covered with juniper bushes and oak coppice, which continued for several miles, varied by a few pines and gum-cistus. At 6h. 43m. we descended into a narrow plain watered by the Banas Chai, which rises eight hours off to the N.E. Its course is nearly S.S.W., and even here was not fordable. After crossing it by a long wooden bridge we

* This was probably the road followed by Paul Lucas, and Tavernier.

halted for the night at the neighbouring village of Sousous Kieui, not wishing to reach Ahat Kieui in the dark.

April 6.—Before starting this morning, we copied several inscriptions from the wall of the mosque.* Most of them are sepulchral, but No. 25, containing the words [ΑΥΤΟΚΡ]ΑΤΟΡΙΚΑΙΣΑΡΙ upon the fragment of an architrave, must have belonged to a building dedicated to one of the Emperors, as the word ΠΡΟΠΥΛΟΝ also occurs in it. One of the tombstones was divided into four square compartments under a pediment, in each of which were carved different tools and implements of trade, as in those at Ushak.† We started at seven, and soon reached a mill turned by the stream from Ahat Kieui. Near it we found the fragment of an architrave, with a mutilated inscription.‡ Another half-hour's ride brought us to the object of our search, three miles E. of Soosous Kieui, and seventeen from Ushak, in a glen watered by a rapid torrent. As we approached the village we observed on the summit of the hill on our right, which proved to be the Acropolis, what appeared to be a mass of ancient buildings, to which we immediately ascended. The village was full of broken columns and fragments of sculptured marble, and on the steep side of the hill we passed several tombs excavated in the solid rock, in some of which were many small niches, and on reaching the building which had attracted our attention, found it to be part of the theatre. This was conclusive as to its being the site of an ancient city, and we had no hesitation in giving it the name of Trajanopolis. The wall which we had seen belonged to the scena and proscenium, and was of massive construction, being built of large Hellenic blocks, in regular courses, but not having the perpendicular joints always at right angles with the horizontal joints. The seats of the cavea were gone, nothing but a semicircular hollow being visible, the lower part of which was filled with the fallen ruins of the

* See App. Nos. 24—27.

† This practice of carving the tools and implements of trade upon their tombstones is still observed by the Armenians and Jews of Constantinople.

‡ See App., No. 28.

scena and proscenium. The wings of the cavea have also disappeared, leaving only about sixty feet of the walls of the scena, half the whole length, still standing, nearly twenty feet high. At the north-west end is a large oblong apartment, thirty-three feet by twelve, with two doorways, one of which opens into the proscenium or pulpitum, while the other leads into a central space, where an opening eighteen feet wide appears to have existed between the buildings which form the two extremities of the scena. Many fragments of sculptured friezes, architraves, and cornices, lie scattered about on all sides, and at a little distance off a very well-executed bas relief half-buried in the ground, which we cleared out, after sending to the village for a mattock. It seems to represent a Titan, as seen in the following sketch.

No. 6.

[*Bas relief at Ahat Kieui.*]

The summit of the hill above the theatre was covered with the ruins of other buildings; but, with few exceptions,

in too dilapidated a state for us to ascertain their nature. The hill itself consists of a narrow ridge, extending from the S.E. to N.W., having the deep valley of Ahat Kieui on the N.E., and another similar glen on the S.W. These two valleys meet at the north-western extremity of the promontory, whilst the other is connected with a range of wooded hills. The position is thus one of great strength, which is improved by a rising ground near the centre of the ridge, on which most of the ruins were placed, and where we found the remains of another but much smaller theatre. Of the scena only the foundations remain, which can be traced distinctly, as well as five or six rows of the lower seats of the cavea, most of which are *in situ*. The fronts of these seats are hollowed out underneath like those at Azani, and at the ends of some of them I observed the lion's claw. The length of the scena, which appeared to extend as far as the external diameter of the cavea, was thirty-six paces.

On the S.W. side of the hill, considerable remains of the city walls, constructed of large and massive blocks of marble, were still visible, built, or rather restored, by the Byzantines, as they consisted chiefly of fragments of architecture, representing dentils, architraves, and Ionic cornices, as well as of many of the seats of the plundered theatres. Looking north from the extreme point of the Acropolis, we saw the ruins of several ancient buildings, probably tombs, in the plain below. Returning eastward, we observed the remains of a large and massive wall of considerable height, and apparently of the Lower Empire; it is formed of a mixture of bricks and stones in irregularly alternating courses, like most of the buildings of that age, or even of the later Latin. Near it were several large marble slabs, on one of which was a Greek cross.* Trajanopolis is mentioned in the Council of Constantinople,* from whence we may conclude that it had a Christian church, of which this may be the ruins. About 200 yards further south were the

* Cramer, Asia Minor, vol. ii. p. 59; ii. p. 240.

foundations of a small temple, the ground plan of which may be distinctly made out. It is built of very coarse stone, and underneath are two small vaults, with well-formed arched roofs. One of these is immediately under the centre of the cella; I descended into it by a small opening in the top, and found it nearly filled with rubbish. From the other vault, which is much smaller, and is separated from the larger one by a wall of large stones, many human bones have been brought up.

At the south-eastern extremity of the Acropolis we observed three semicircular towers or bastions, apparently a continuation of the wall, beyond which again were heaps of stones, and ruined walls and terraces, which may mark the site of a temple or propylon, possibly the one alluded to in the inscription at Sousous Kieui; a paved road leads to the Acropolis from the S.E.; it was evidently the ancient approach to the town.

In the burial-ground beyond the valley we found many fragments of columns and other architectural sculpture, and a few inscriptions, chiefly sepulchral, but none of any particular interest.*

Soon after twelve we set out for Segicler, descending the valley as far as the mill, where we left the road to Ushak, and ascended the hills to the S.W., which, like those beyond the Banas Chai, were covered with yellow clay, containing many rolled blocks of quartz and schist; but higher up consisted of schistose rocks traversed by veins of quartz, and associated with thick beds of crystalline limestone. At half past two we were on the south-western slope of a long and lofty chain of mountains on our left, consisting of quartz rock often stratified, micaceous schist, and crystalline limestone. These mountains are called Bourgas Dagh, and extend nearly to Ishekli, forming the eastern boundary of the plain below, which stretches to the west as far as the black volcanic looking mountains beyond Göbek, which we still believed to be part of the Catacecaumene. At

* See App. Nos. 29—37.

four P.M. we left the mountains, and entered a more level country, consisting of gravel and conglomerate of quartz and schist pebbles, derived from the neighbouring hills; and after travelling for three miles over a well-cultivated country reached the village of Segicler, where we saw many fragments of sculptured marble lying about, or built into the walls of the cottages. About a quarter of a mile S.E. from the village are two large tumuli; one of which bears marks of an attempt having formerly been made to open it.

We halted here for the night, and were accommodated in the Oda, where, as usual, numbers of the villagers came in to see how the Franks spent their evening, how they ate their dinner, and how they smoked. For us the novelty of such companions had now worn off, and we felt, however interesting such visits might be occasionally, that travelling in the East would be most unsatisfactory, if purchased at the expense of fifteen or twenty dirty peasants crowding up our small room every night, giving way to their unceremonious curiosity on all occasions, and interfering with the domestic occupations of our servants; we therefore determined, however rude it might appear, to eject them. It may be of no consequence to those who are travelling only for a few days, to have their room crowded in the evening, after having been on horseback all day; but with the prospect of occupying several months in this way, the idea of passing our evenings in such a manner was not to be endured. It proved, however, a more difficult task than we had expected, for our visitors refused to take every hint which Giuseppe gave them of our wishing to be left to ourselves; and when at length they were requested to move out, they absolutely refused, saying it was a public room, and they had a right to remain.

No doubt they thought this a most conclusive argument, but with the firmahn which we had obtained at Constantinople, we had a right to a Konak in a private house wherever we halted, and our accepting the Oda was a condescen-

sion on our part. When they therefore began to talk about their right to remain in a public room, we knew how to proceed, and directed Giuseppe to explain to them the nature of our firmahn, and to say that, if they did not immediately depart, we should complain of their conduct to the Agha of Göbek, in whose district this village is situated. They understood the hint immediately, for they well knew how readily any complaint of that kind would be seized hold of as an excuse for extortion; the threat produced the desired effect, for in two minutes the room was cleared. I mention this trifling incident, merely to show how easily the Turkish peasants are managed, when you possess the least authority, and how untractable they become when they think you are at their mercy.

However, it was fated that the night should not pass away without other adventures, for I was awakened about three in the morning by hearing Theodore screaming out most lustily that the horses were treading on him, and Strickland shouting to me to get up. On opening my eyes I certainly saw one of our four-footed companions standing within a foot of me, and warming himself by the fire. It appeared that the Surijis had taken the horses out to water them, and that, in returning to their stable through our apartment, curiosity had led two of them to wander from their path.

April 7.—Segicler to Göbek eight hours. Before starting we copied two inscriptions* in the wall of the mosque, both beginning with the words Η ΒΟΥΛΗ ΚΑΙΟΔΗΜΟΣ. This is always an interesting commencement of an inscription, as the name of the town is generally added, as was the case with one of these, on which we read Η ΒΟΥΛΗ ΚΑΙΟΔΗΜΟΣ ΣΕΒΑΣΤ . . . . ΕΤΙΜΗΣΑΝ. There can be no doubt that the obliterated letters were ΗΝΩΝ. The inscription thus refers to the town of Sebaste, of which name we know there was a town in Phrygia Pacatiana from

* See App. Nos. 38 and 39.

Hierocles and the Councils,* as well as from its coins, which are imperial, with the legend of ΔΗΜΟΣ ΣΕΒΑΣΤΗΝΩΝ. Mr. Arundel, when here in 1833, was convinced that Segicler stood on the site of an ancient town, but, not having discovered the inscription at the mosque, was inclined to call it Eucarpia.† But Eucarpia was on the road from Dorylæum to Apamea Cibotus, which must have passed fifteen or twenty miles to the east of this place. The supposition that we were now on the site of Sebaste is strengthened by the name of the stream which rises not far off at Bounarbashi, and to which Arundel gives the name of Sebasli.‡

The other inscription is not without interest, being in honour of a person of the name of Capito, son of Socrates, who was sent as ambassador to the Emperors. Unfortunately there is no date, and no Emperor's name is mentioned.

We left Segicler at a quarter before seven, proceeding due west along the plain; but soon descended into a deep valley, leaving the village of Sesac half a mile off on our right, and that of Hadjiler one mile farther on our left. Here we came upon the great horizontal formation of white cretaceous limestone, of which the plain consists as far as Göbek and Suleimanli. The edges of this lacustrine basin are interstratified with beds of clay, sand, and gravel, which have been washed down from the mountain-chain to the east.

Beyond Hadjiler we entered the valley of the Banas Chai, flowing S.S.W., and crossed it by a long bridge, beyond which we ascended to the level plain, extending many miles on all sides, and traversed by deep and winding valleys hollowed out by the action of running water.

Five miles west of Segicler we crossed the direct road from Ushak to Ishekli, and soon after passed close to the

* Hierocl. Synecd. Wess., p. 667.
† Arundel, Asia Minor, vol. i. p. 136.
‡ Arund. ut sup. pp. 131-137.

dreary village of Couchas, where we admired the picturesque appearance of a numerous caravan halting before the village, the camels sitting on the ground with their bright scarlet pack-saddles, while the drivers were collected in groups around their fires. We continued in a westerly direction over the plain for several miles, the cold being very intense. Wherever the limestone appeared on the surface, the land was barren and unproductive; but where patches of the red clay above mentioned occurred, as was the case in numerous hollows, they were well cultivated. This distribution of red clay over the surface of the plain proves that it continued under water for some time after the limestone ceased to be deposited; but I observed no gravel or pebbles as we approached the centre of the plain; these would not have been held in suspension by the water so long as the finer particles of clay.

At 11h. 30m. we reached the village of Kalinkase, and copied the monogram upon a stone at the fountain already described by Arundel.* It is difficult to say what it may have been intended for, but I am inclined to think it of the Byzantine times. Near this village we saw two or three coveys or packs of the sand-grouse or *perdrix du désert*. It is the attagen of the ancients, and I believe the same bird as the ortega in Spain. The Turks call them bagrakala or bagralach. They are very wild and cautious, and are generally found in great numbers on most of the elevated plains and table-lands in Asia Minor.† One peculiarity in their habits is the great length of time they remain upon the wing.

Passing by the village of Toutlujar, we saw a large but damaged sarcophagus near the fountain. Here our course became rather more southerly, and two miles farther we observed a deep valley on our right, in which the stratifica-

* Arundel, Asia Min., vol. i. p. 127.

† Mr. Strickland observes that it belongs to the genus Pterocles; but as he failed in obtaining specimens, he cannot give the specific name.

tion of the limestone was well exposed. It was most agreeable to see the steep sides of the ravine covered with pines, as for many miles we had not passed a single tree: a leaf blown past us by the wind appeared like a wanderer from some distant land that we had long lost sight of. We soon descended into the ravine, and having crossed the stream at the bottom flowing south towards the Mæander, ascended the opposite bank. This river must be the Kopli Su, which Tavernier crossed in the plains of Einéh, on his way from Allah Sheher to Afiom Karahissar, eight hours before he crossed the Banas Chai, but probably more to the south, and nearer its junction with the Mæander.

At three P.M. we reached Göbek, which presented a ruined and miserable appearance. The houses are built entirely of mud, and a crop of grass growing on most of the flat terraced roofs alone distinguished them from the arid fields around. The khan to which our Ushak guides had brought us was so filthy and dilapidated that we were obliged to apply to the Agha for a Konak; he was himself living in a miserable chiflik, or farm-house, made up of ruined mud huts. Although many marble fragments are built into the wall of the mosque, we saw no inscriptions, but afterwards in the burial-ground found one, which we were assured had been brought from Suleimanli.* It begins with the words ΒΛΑΥΝΔΕΩΝ ΜΑΚΕΔΟΝΩΝ; and as there is no reason to doubt its having come from thence, it proves the ruins at Suleimanli to be those of Blaundus, instead of Clanudda, as conjectured by Arundel. Blaundus is mentioned by Hierocles as one of the cities of Phrygia Pacatiana, and there can be no doubt that these ruins are situated within the limits of that province.

From the burial-ground we walked to see the ruins of an ancient castle pointed out to us on the banks of the river, nearly two miles off to the south. After walking about a mile across the plain we suddenly reached the edge of the

* See App. No. 40.

deeply excavated valley, through which the Kopli Su flows; a wild and fantastic scene presented itself to us on our first coming in sight of the ravine, the precipitous and water-worn rocks on each side of it assuming the wildest and most extraordinary forms. The river flowed along its winding bed at least 500 feet below us, while immediately in front, perched upon a lofty and almost insulated rock, with perpendicular sides, and connected with the plain on which we were by a narrow ridge of rock, scarcely twenty feet wide at the summit, and between 200 and 300 feet high, stood the ruined castle we were in search of. Not the least curious features of the scene were the remarkable contortions of the river, sometimes returning, after a course of two miles, to within fifty yards of where it had flowed before, separated from its former bed by a long, narrow wall, upwards of 300 feet in height. The steep chalky sides themselves are worn and weathered into every possible variety of form. Here a detached peak, like a Gothic church, raises aloft its tapering spire; there a huge mass of perpendicular wall, with its rents and fissures, its dark caves and deep-worn crevices, stands forth like the palace or castle of an age of giants. There seemed no end to the lofty pinnacles and narrow promontories round which the river flowed, and whose fantastic shapes increased the peculiarity of the scene. But what added much to the striking effect of the view was the remarkable horizontal stratification of the white rock, increasing the illusion of its being a mass of ruined buildings. But the castle itself was as usual a disappointment; we climbed up to it with great difficulty, and found only a few walls of rude coarse masonry which in the times of Byzantine or Turkish warfare had defended this passage of the river; or where some chieftain of the middle ages had built himself a fort on the summit of one of the insulated peaks.

On returning to our konak we found a cunning Dervish with a bagful of coins waiting for us; we spent a great part of the evening looking over them, but his demands

were so exorbitant that we could not come to terms with him. He had, however, some good coins of Grecian cities, many of which I subsequently obtained; but out of a small packet of eight, which I bought from another person in the town, five belonged to Blaundus, which adds to the probability of its ruins being in this neighbourhood.

CHAPTER IX.

Göbek to Suleimanli — Blaundus not Clanudda—The existence of Clanudda doubtful—Road to Tacmac—Trachytic mountains—Aktash—Reach the Catacecaumene—Koula—Karadevlit.

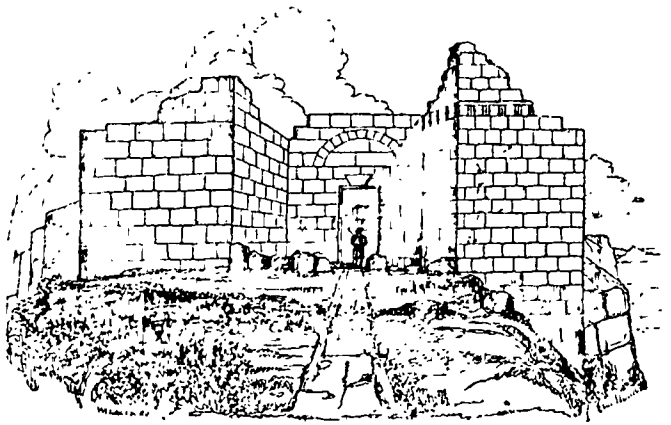
WE left Göbek for the ruins of Suleimanli at 7h. 5m., passing over an undulating, well-cultivated country, until we crossed a deep ravine, two miles to the south-west of the town, after which all cultivation ceased, and the country was covered to a great distance with a thick growth of low dwarf ilex. At 8h. 46m. we caught a glimpse of the ruined walls, and soon after descended into the deep ravine in which the village of Suleimanli is situated. The sides of this valley have been excavated for numerous tombs, which give it a peculiar character. In several we saw the remains of fresco paintings, but the drawings were chiefly architectural; each tomb contained several niches or recesses, and in each of these were three places for depositing bodies.

Leaving our horses and baggage at the Oda, we ascended the steep side of the Acropolis, a flat, narrow peninsula, extending nearly a mile between two deep ravines. Near the foot of the hill are the remains of the theatre; the scena is entirely thrown down, but the ruins of it, together with various sculptured fragments, lie scattered about in a vast confused heap. Some of the seats are *in situ*, as well as the steps between the cunei, the seats of which are ornamented with the lion's claw, as at Azani and Trajanopolis. The gate of the town is built upon the narrow neck of the peninsula, where it is not sixty paces across, within which the table-land again swells out to a considerable width.

Notwithstanding the opinion of a recent traveller, who

says that this gateway belongs to the Lower Empire, there can, I think, be little doubt that it is Roman, even if it cannot lay claim to still greater antiquity. He says that it was originally arched, and that the top has been since filled in and squared off. But it is evident from the accompanying sketch that it must have been square from the

No. 7.



[*Gateway of Blaundus.*]

very first; for the arch on the outside is insulated and separated by three courses of stone from the sides and top of the gateway, and is merely the continuation of that within, which has been carried through the wall, for greater strength or ornament. On each side is a massive square tower, built of Hellenic blocks, which, as well as the connecting wall, were originally surmounted by a Doric frieze, with triglyphs, part of which is still remaining, and which I do not believe has been brought from the Doric portico within, as stated by Arundel;* although the wall on the western side, which retires from the tower, has been repaired at a subsequent period with marble blocks derived from other buildings.

* Asia Minor, vol. i. p. 86.

A short distance within the walls on the left, amongst a heap of ruined buildings, are the foundations of a massive edifice of an oblong shape, immediately below which are the remains of what may have been a stadium. Somewhat further in, a little to the right of the axis of the gate, are the prostrate ruins of a beautiful temple, where fragments of architraves, friezes, and pediments, with broken shafts of columns, heaped together in rude confusion, prove a sudden rather than a gradual overthrow. Amongst them we found the headless statue of a Roman senator or emperor, and several fragments of inscriptions,* some of which have been imperfectly given by Arundel. We copied No. 41 from portions of the architraves, and there can be little doubt that they belonged to the temple, the ornaments of which resembled those of the Erechtheum at Athens, and the temple of Jupiter at Azani.

South of the temple are the remains of a rude Doric portico with square pilasters, four of which with the architrave were still standing, while others were lying on the ground near the spots where they once stood. Farther on is another portico or colonnade of curious oblong columns, formed by the addition of two half-columns to the opposite sides of a square pilaster. Six of these were standing, and the fragments of others were lying on the ground. The direction of the portico is nearly E. and W., and may mark the site of a Byzantine church.

Near the southern extremity of the Acropolis are the remains of an apparently very ancient building, but the side-posts of the doors, and window-cases of the two sides, are alone standing. The spaces between these large blocks were probably filled up with smaller stones, which have fallen away, leaving nothing but a gigantic skeleton. The form of the building is oblong, and it may have been the cella of a temple. The whole area of the city is covered with fragments, many of which have been used as the

* See Appendix, Nos. 41 and 42.

foundations of more modern buildings; and a street may be traced lined with the foundations of houses on each side, built of the ruins of older edifices.

On the narrow isthmus, outside the gate, are the remains of three more temples, marked by heaps of ruins, the architecture of which seems to have been highly finished, and of which the foundations can be distinctly traced. The columns of all were fluted, but at the one nearest the gate the fluting has only been brought half-way down. The ruined arches beyond, alluded to by Mr. Arundel, are clearly the remains of an aqueduct for the supply of the Acropolis; they occur just where there is a slight depression in the ground, and traces of them may be perceived along the top of the ridge for some distance.

With regard to the ancient name of these ruins, it is remarkable that the name of Blaundus does not occur in the list given by Hierocles of the towns of Phrygia Pacatiana, although it is mentioned in the Notitiæ, and the number of its coins proves it to have been a town of considerable importance. Hierocles, however, speaks of a town called Lounda, which may be a corruption of the other name, not worse than ΣΙΤΑΙ for ΣΑΙΤΤΑΙ, or ΒΑΓΙΣ for ΒΑΓΑΙ: Blaundus is sometimes assigned to Lydia, which is not improbable when we consider the situation of Suleimanli on the very borders of Phrygia and of Lydia.

The name of Clanudda occurs in no ancient writer, nor in the Notitiæ, nor in Hierocles; and my opinion is that no such town ever existed. The only authority by which it is mentioned is the Peutinger Table, and it is unnecessary to remind the reader of the extreme carelessness with which names are often given in that document. That of Clanudda probably originated in a corruption of those of Blaundus and Aludda. Through the inaccuracy of copyists, the Greek K and B are easily confounded, particularly if not clearly written; and in copying the route from Dorylæum to Philadelphia, after having written Aludda, they may have added the same termination to the following word, already half

written, and thus produced Blaunudda ΒΛΑΥΝΥΔΔΑ, or ΚΛΑΥΝΥΔΔΑ, when the mere change of Υ into Ν would give us the doubtful form of Clannudda. The mere circumstance of its immediately following Aludda is alone suspicious.*

But it has been said that coins of Clanudda have actually been found; and that their authenticity rests upon the authority of Mr. Borell of Smyrna. Mr. Arundel mentions two,† but I am informed that the one which he calls Lord Ashburnham's is the same as that which was formerly in Mr. Borell's possession, and has since been lost. Now, it is a remarkable fact that in the very oldest autonomous coins of Blaundus, distinguished for their thickness and good work, of which I have several, and some of which I procured at Göbek, the name of the town is always spelt Mlaundus; nothing was more easy than to mistake Μ for ΚΛ supposing it written ΜΛ, which I cannot help thinking has been the case with this supposed coin of Clanudda.

The probability of Suleimanli occupying the site of Blaundus is also borne out by two other facts: first, the inscription found at Göbek beginning ΒΛΑΥΝΔΕΩΝ ΜΑΚΕΔΟΝΩΝ leaves little or no doubt upon the subject; and secondly, that Suleimanli is nearly on the direct line of road between Philadelphia and Kutahiyah, and by which the caravans now travel. I have only to add that the whole distance between Philadelphia and Dorylæum by the tables is 155 M.P., or about 112 geographical miles; and from Philadelphia to the Clanudda of the tables 35 M.P., or about 26 geographical miles, whereas on the map the distance is rather more. But I am aware that this question ought to have been more carefully investigated, and particularly the line of country between Suleimanli and Philadelphia; our anxiety, however, to return to Smyrna, both on account of

* I shall show, in another place, that similar errors have crept into the Peutinger Table with regard to towns between Tavium and Zela on the road to Neocæsarea.

† Asia Minor, vol. i. p. 92.

Mr. Strickland, and for a sick servant who was with us, was the cause of several points on this route being less carefully explored than they deserved.

Leaving the Oda of Suleimânli, and passing by the gate of the Acropolis, we travelled north for three miles along the line of the ancient aqueduct. Its course was marked by low heaps of stones, the remains of the fallen piers, which occurred at regular intervals, but were almost concealed by the dwarf ilex-bushes which covered the plain. Ten minutes after two we crossed a high road leading from Göbek to Smyrna; this road would have taken us direct to Tacmac, but our guide preferred another, by which we lost our way. However, we had some consolation in passing through the remarkable mass of black trachytic mountains, which we had been constantly looking at for several days. They rise abruptly from the great cretaceous plain of Göbek, of which they form the western boundary. Their appearance is striking and picturesque, towering up into lofty peaks, like a cluster of rocky islands in the sea.

Four miles N. of Suleimanli, near a fountain, we changed our course from north to west and crossed the great caravan road from Ushak to Allah Sheher, which probably occupies the same ground as the ancient road from Dorylæum to Philadelphia. The country became more undulating as we approached the mountains, while the boulders of trachyte and other igneous rocks scattered over the surface increased both in size and number as we advanced, particularly after passing the village of Karajah Achmet Kieui. The white marly limestone gradually thinned out, being replaced by beds of sand and gravel dipping slightly to the east.

At four o'clock we reached the hills, and, as we crossed a deep and narrow water-course, found a section showing the sand and gravel containing boulders, overlying beds of trachytic tufaceous conglomerate, the whole resting against the trachyte, which must have existed previous to the deposition of the horizontal marls.

Nothing can be more wild and dreary than this rocky

region. No traces of cultivation appeared for many miles, and scarcely a symptom of vegetation was to be seen. On each side the rocks rose into high jagged peaks of every variety of form. A few stunted oaks grew near their base, but the whole intervening country offered nothing but a chaotic wilderness of rocks and boulders; whilst in some places mica schist and quartz rock forced up by the elevation of the trachyte added to the sterility of the soil. These rocks had evidently been altered by igneous agency, for in some of the ravines I observed the quartz rock stratified, and a hard blue semi-vitrified rock resembling clay altered to jasper or Lydian stone. As we advanced the country became more wooded, and we passed through extensive coppices in which the young oak-trees were covered with gall-nuts, large quantities of which are sent to Smyrna for exportation.

We had hitherto supposed that these trachytic hills were the commencement of the Catacecaumene, which is represented in many maps as extending still farther to the east, but we now discovered that they formed an insulated mass, unconnected with any other system of igneous rocks. At a quarter after six we emerged by a wide open valley, and, turning south, kept along the foot of the hills until we reached a small farm or chiflik belonging to the Agha of Tacmac, where we were obliged to halt for the night in a wretched outhouse. The farm was inhabited by a family of Euruque shepherds, who, as well as the Turcomans, retire during the winter to the plains beyond Kutahiyah.

April 9.—We started for Tacmac soon after sunrise. The undulating ground was strewed for some distance with boulders and pebbles of trachyte, but it became flatter as we advanced, the boulders at the same time diminishing in number. The soil consisted of beds of sand and gravel, the trachyte being replaced by quartz pebbles and fragments of schistose rocks, which near Tacmac appeared *in situ* cropping out above the level of the plain. On our left they rose up into low hills, connected with the range

which extends to the south of Koula, and may be called the commencement of Mount Tmolus. The ground sloped away to the right, and the streams which escaped from this elevated plain appeared to join the Hermus.

At half-past eight we reached the konak of the Agha; a miserable wooden building, in the middle of an extensive court-yard, surrounded by a wall, which, from its massive buttresses and crenelated parapet, had evidently been built for defence. Hundreds of storks in undisturbed possession had built their nests upon its ruined top, and with their noisy clattering and constant fluttering added considerably to the interest of the scene before us.

The Aghalik of Tacmac, though very considerable, is dependent on the Pacha of Kutahiyah. The present possessor was a favourite of the Hasnadar or Treasurer at Constantinople, and I have seldom seen a man of more striking personal appearance or more prepossessing grace of manner; although liable to the imputation of affectation and display, on account of the splendid pelisse in which he was enveloped, which consisted of red cloth covered with gold embroidery and brocade, lined throughout with the most costly furs. He pressed us anxiously to stop with him for a day, but my companion's business and Theodore's illness rendered this impossible, and, as no horses were to be procured at Tacmac, he compelled our Surijis to take us on to Koula, eight hours farther, with the condition on our part of halting for the night at Aktash, a small village half way between Tacmac and Koula.

Soon after leaving this place we ascended a low ridge of schist and quartz rock with an almost vertical dip, the quartz rock being occasionally stratified, apparently an altered sandstone; and having reached the summit, commenced a long descent between wooded hills, and over many successive ridges and valleys, as far as Aktash. For the first four or five miles we followed the bed of a rapid stream, amidst wild and picturesque scenery, which later in the spring, with the trees in full foliage, must be extremely beautiful.

On our left the wooded hills rose to a great height backed by rocky mountains extending to the south of Koula. The same formation of mica schist and quartz rock continued the whole way; the trees were universally oak, and pollarded, a practice resorted to by the Euruques, who, pasturing their flocks and herds on the mountains during the summer, cut off the tender shoots and branches, in order that their cattle may graze upon the leaves; in consequence of which, few, if any, of them ever reach maturity.

On the summit of one of these low transverse ridges I sketched a curious mass of rock which in consequence of the effect of weathering had been worn into a remarkable form, bearing a striking resemblance to a human head, and only supported by a very small base.

The character of the country was the same until we reached the secluded village of Aktash at two P. M., in a ravine situated half a mile to the north of the road. In the afternoon we ascended a high hill to the east, consisting like the others of mica schist and quartz, on many fragments of which traces of oxide of titanium were observable, of which Mr. Strickland procured a large crystal in the ravine. The view from the summit was most extensive, overlooking towards the north the remarkable valleys of denudation through which the Hermus flows, with extensive insulated table-lands on each side of the river, which have been successively the bottom of a lake and the level surface of a plain, and are now the summits of elevated plateaux. The indented and wavy line of their edges and precipices proves that the river has been the agent in producing the present appearance of the country, and that it is not owing to cracks or fissures caused by earthquakes or volcanic efforts. Farther north we perceived the snowy tops of Akdagh bearing N. by E., and Morad Dagh bearing N.E., while to the south the view was bounded by the snowy tops of Mount Tmolus. Water boiled at Aktash at 207°·4 Fahr., which gives an approximate elevation of 2800 or 3000 feet.

April 10.—We started from Aktash for Koula, at seven,

and regained the high road near a Turkish burial-ground on the summit of one of the transverse ridges of mica schist extending from the mountains on the south towards the valley of the Hermus. About six miles east of Koula we descended into the plain, where the soft mica schist, which is easily weathered, has contributed to form the lacustrine deposit through which the Hermus now flows; the gradual wearing away of which has in its turn supplied the soft alluvial mud carried by the same river into the Gulf of Smyrna. On reaching the plain we obtained the first conclusive evidence of approaching the Catacecaumene, or "burnt up" district. On the opposite side of the ravine, into which we descended, the alluvial beds were covered with a thick capping of imperfectly columnar basalt, and presently we came in sight of several conical hills on our right, distant about a mile from the road, on the summit of one of which we distinctly saw a crater, the sides of which were partially broken, and soon after we crossed a bed of black and scoriaceous lava which had issued from one of these cones. This stony plain, generally well cultivated, was dotted over with numerous fruit-trees. At nine we forded a small river flowing N., formerly crossed by a bridge higher up the stream, the remains of which are still visible.

From hence the ground rose gradually over schistose rocks, until at 10h. 4m. we reached the summit of a ridge of mica schist and quartz rock, which separates the plain of Koula from the country to the east. Here a remarkable scene suddenly presented itself to us, and by a single glance revealed some of the principal features of the Catacecaumene. Beginning with the north on our extreme right was the barren termination of the ridge on which we stood; to the west of which a black and dome-shaped hill of scoriæ and ashes rose about 500 feet above the plain. This was the Karadevlit or Black Inkstand, the volcano of Koula—so near to us that none of the effects of its wild and rugged character were lost, and so steep that to ascend its slope of cinders appeared impossible. In front of us a black and

rugged stream of lava extended from right to left, the surface of which, broken up into a thousand forms, looked like the breakers of a sea converted into stone, amidst the fury of a gale; and forming, as it issued from the base of the cone, a striking contrast with the rich plain through which it seemed to flow. Beyond, to the N.W., were other volcanic cones, which, from their smooth and cultivated appearance, the vineyards reaching to their summits, must have belonged to a much older period. Further to the left was the town of Koula itself, with its tall and graceful minarets rising above the lava, on the southern point of which it has been built, while the background of the picture was filled up by a range of picturesque and undulating hills stretching in a semicircle round the plain from S.E. to N.W.

After making a hasty sketch of this scene we descended to the plain, which appeared subject to frequent inundations. It was now dry and deep in sand, bounded on the left by the hills which we had just quitted, and on the right by the black stream of lava. At twenty minutes after ten we reached the town, and winding through its narrow streets were struck with its dark and sombre look; the houses, built of the black lava on which the town stands, are generally separated from the road by a clean and well-paved court, surrounded by a high wall, which adds to the gloomy appearance of the place. They are, however, for the most part, neat and comfortable, and occasionally we caught a glimpse of smiling Greek faces through the open doorways. This was the first place since we had left Brusa, in which we found a Greek population; and the females not so fastidious as the Turkish women, who invariably run away and hide themselves from our sight. The population of Koula is said to be 1800 or 1900 families, of which 600 at least are Greeks. We observed many fragments of marble and ancient sculpture, as we rode through the streets, both at the public fountains and in the walls of private houses.

Having established ourselves in an empty apartment in

the Yeni-khan, and settled with our Ushak surijis, we started to examine the volcanic cone, situated about a mile and a half N.N.E. from the town. The road led entirely over the rugged surface of the lava, where a rude path has been worn for the convenience of the neighbouring villagers. A rough ascent over black and red cinders brought us to the narrow summit. Here at our feet were the remains of the crater, a deep circular basin broken away to the north-east, and formed of loose crumbling fragments of red and black scoriæ and ashes; but not more than a tenth part of the edge of the crater can now be seen.

On our return to Koula we observed a fine sarcophagus of white marble with a mutilated inscription, beginning TIBEPI···KΛΑΥΔ··· near one of the fountains, as well as a large figure of a lion in white marble, well executed and in good preservation. A Greek, whom we found in the khan, spoke of many places in the neighbourhood, where antiquities and ruins existed, such as Ghieurdé, Megne, Davala, and Hamamli. Davala, described by Mr. Arundel, is the ancient Tabala; Megne, which I subsequently visited, is the Mæonia of the ancients. To Hamamli and Ghieurdé, although probably the sites of ancient cities, I am unable to assign their proper names.

CHAPTER X.

Leave Koula—Volcanic Country—Adala—Basaltic Rocks—Plain of the Hermus—Tomb of Halyattes—Ruins of Sardis—Cassabáh—Road to Smyrna—Plain of Ninfi—Pass of Kavakli Dere—Reach Smyrna—Hints to Travellers.

APRIL 11.—In consequence of its being Bazaar day, the market was overflowing. Carpets and leather for shoes were the principal commodities offered for sale; the latter being tanned in the town, and the former made by the Euruque women in the neighbourhood. They all appeared to belong to the rug species, and might be procured at all prices from 60 to 500 piastres (twelve shillings to five guineas).

At nine we started for Adala, distant eight hours. After crossing the flat plain to the west of the town for about a mile, we ascended the gently sloping hills, which consisted of brecciated conglomerate of the older rocks, as mica schist, stratified quartz rock, and marble, which we soon found *in situ*. These hills were generally cultivated to their summits chiefly with vines and were covered with a rich vegetation; while many spots were enamelled with beautiful spring flowers, and anemones of every hue, particularly a brilliant scarlet, decked the ground under our feet.

About three miles from Koula, we perceived on our right several volcanic cones planted with vines, and which appeared to belong to an older period than the Karadevlit; while another, black, cindery, and scoriaceous, and resembling it in every respect, was at some distance to the N.W. Half a mile further we passed another cone on our left, and for some way found the road covered with scoriæ, ashes, and lapilli, the soil also being black and cindery, and mixed with blocks of quartz-rock and lava.

After another mile and a half in the same direction we descended into an undulating valley plain, bounded by several volcanic cones on our right, and a chain of mountains on our left, where numerous camels were grazing on the ilex bushes and other thorny plants. Before reaching the end of the plain, which was seldom above a mile in width, we observed another black and cindery cone, resembling the Karadevlit of Koula on our right, and about five or six miles to the west of the last. A subsequent examination of the country showed me that there were only these three cones of this most recent character, from each of which a considerable stream of black and scoriaceous lava has flowed towards the Hermus. They are distant from each other about five miles, and answer precisely to the τρεῖς φύσαι in Strabo's description of the Catacecaumene;* and perhaps in his day smoke or some igneous vapour may have issued from these volcanic vents.†

At 12h. 15m. we reached the summit of the low ridge which forms the western limit of the plain, whence we commenced a rapid descent down a narrow glen between steep and contorted schistose rocks, traversed by numerous quartz veins, and covered, wherever there was sufficient soil, with a thick underwood of ilex, oak, and juniper. A small stream ran along the bottom, occasionally absorbed in the sandy bed, to reappear again amongst the rocks below. The incipient vegetation of the spring burst upon us with increased beauty at every step of our descent. Asphodels (the star of Bethlehem), arums of two species, the common large white one, and the Arum Dracunculus, appeared in rich luxuriance; while lower down the ground was studded with a small and beautiful blue Iris.

Soon after one we passed another fountain and a guard-house, where we were challenged in rather a peremptory manner for a bakshish. The guards who are stationed to

* Strabo, lib. xii. c. 8.

† A full account of the Geology of the Catacecaumene will be found in Vol. II.

watch these mountain passes are generally Xebeques, a class of peasants inhabiting the banks of the Mæander, and the country between that river and the Hermus, and who a few years ago, for some real or imaginary wrongs, rose in arms against the authority of the Sultan. They were, and occasionally still are, as great robbers as those whom they profess to put down, and generally keep a coffee-shop, which affords a decent excuse for every passer by to halt, and under the pretence of refreshment, to allow himself to be quietly relieved of a few piastres in the shape of bakshish.

We were much struck, on all the roads in Asia Minor, at the great number of fountains which we met with. They are invaluable to the traveller over the parched and dried-up plains, and are often the result of the pure benevolence and genuine native hospitality of the Turkish peasant. In some places, where there is no spring or supply of water to form a running stream, the charitable inhabitant of a neighbouring village places a large vessel of water in a rude hut, built either of stone or boughs, to shade it from the sun; this jar or vessel is filled daily, or as often as necessity requires, and the water is sometimes brought from a distance of many miles.

At 1h. 22m. we left the valley, and turned suddenly to the right over the hills, which began to show symptoms of cultivation. I was much struck with the simplicity of many of the agricultural implements of the Turks, which did not appear to have benefited by the improvements in machinery since the days of Triptolemus. The harrow consisted simply of a heavy log, or beam of wood placed at right angles to the pole, to which were yoked a pair of oxen—the driver standing upon the transverse beam, in order to increase the weight, as it was dragged over the furrows. The threshing board was a piece of wood about four feet long and nearly two in width, somewhat resembling those used in Spain; but here the lower surface was stuck full of flints, placed edgewise, about two inches in length, and projecting about half an inch beyond the wood: in some

places I have seen beautiful agates used for this purpose. Three or four people sit or stand upon the board, as it is dragged over the corn, in consequence of which not only is the straw destroyed, and almost reduced to chaff, but even the corn itself is frequently bruised and broken.

Wheat in this state, however, is much eaten by the poorer classes of Turkish peasants who are unable to procure rice. In many small towns and villages in the interior a marble mortar may be seen in some conspicuous place, where the women pound the wheat with a wooden mallet, for which purpose it is generally slightly moistened; but a pilaff made of this bruised wheat or bulgour, is much inferior to one of rice.

At 2h. 18m. we reached the plain and passed over a mass of soft, grey, easily decomposing trachyte, which rose to a high hill on our left. From hence we continued along the foot of the high mountains on our right as far as Adala, crossing several deep and winding water-courses now almost dry. This range of hills, which forms the eastern limit of the plain of Sardis, and consists of mica-schist and quartzose rocks, acts as a parapet to support the elevated plains and terraces of the interior, which, in some places, are almost on a level with the summits of the hills.

At 3h. 42m. we passed a small village about 200 yards off on our right, called Dombaili. A supposed similarity of names has led some persons to imagine without sufficient grounds, that this is the site of the ancient Tabala, but there can be no doubt that Tabala was at the place now called Davala beyond Koula. Dombai appears to be a Turcoman word; and Dombai Ovasi beyond Dineir is also inhabited by that people. Nothing is to be seen at Dombaili but the huts of Turcoman peasants, who retire there during the winter, after having fed their herds and flocks during the summer months in the rich plains of Sardis.

After another hour we reached the banks of the Hermus, which we were obliged to ford. Its width was very con-

siderable, and in places it was rather deep. On reaching the opposite bank we entered the dirty and dilapidated town of Adala, and proceeded at once to the Agha's konak, where we found the owner, a fat, jolly looking man, sitting under his gateway. He was dressed in his summer dress, consisting of a white jacket, and full and ample trowsers, and he was surrounded by a numerous group of picturesque attendants, some of whom were employed in watering the ground, to lay the dust and refresh the atmosphere. After we had smoked our pipes, and drank our thimble-fulls of coffee, the firmahn, as usual, was produced, and we were recommended to take up our quarters amidst the noise and dirt of the common khan.

Adala is supposed to stand upon the site of Attalia, a Lydian town mentioned by Steph. Byz.,* who says it was anciently called Agroira. There are, however, no remains to give credit to this supposition. While our evening meal was preparing we started to visit an old castle, which we had heard of, to the north of the town, but which proved to be only the remains of a fortress of the middle ages, apparently Turkish, built upon the extremity of the stream of lava which has flowed down the valley of the Hermus from the interior of the Catacecaumene, and has entered the plain by the same narrow gorge as the river to the N.N.E. of Adala. It is a rough, black and wavy mass, like that of Koula, and had attracted our attention before we reached the town. To cross it would be impossible; but we found a narrow path along the edge of the cliff, fifty or sixty feet high, overhanging the river, which we followed for nearly two miles to the gorge itself. As we approached it we found the lava stream, which near the town had spread itself out to nearly a mile in breadth, contracted to a narrow wall not more than four yards in width, presenting a steep escarpment on either side in consequence of the effects produced by the action of time and water.

* Cram. Asia Minor, vol. i. p. 435. Steph. Byz. v. Ἀτταλία.

We did not return from our excursion until the darkness rendered our path over the rugged lava somewhat dangerous, but the beauty of the evening and the softness of the air, so different from what we had been lately experiencing in the high lands in the interior, had tempted us to take advantage of every glimpse of daylight. The vegetation in the plain, and even on the seblack rocks, appeared at least a month forwarder than that which we had left in the interior three days before. The fruit of the wild almond, the branches of which were spinous like the thorn, was already set; and a pretty species of dwarf shrubby laburnum, which I afterwards saw in great quantities in the plains about Smyrna, was losing its flower; we also found a beautiful variety of yellow jessamine, lilac, &c. The Agha, alarmed at our long absence, had sent some of his people to look for us, who grumbled much at being obliged to march over the rugged lava.

April 12. Adala to Sardis.—At half-past six A. M. we left Adala, crossing the rich plains of the Hermus, along the north or right bank of the river. The direct road to Cassabáh by Sardis is only twelve hours, but the Menzilji insisted that we made it fifteen by going round by the tomb of Halyattes. The vegetation on these plains was very luxuriant: for some way we passed through thickets of tamarisk, and heard the nightingale for the first time this year. After three hours' march nearly due west the tumulus of Halyattes formed a conspicuous object in the view, and rose considerably above the numerous smaller tombs by which it is surrounded. This mass of tumuli, of which we counted upwards of sixty, evidently a Necropolis of the ancient Lydian kings, is called Bin Tepéh (the thousand hills) by the Turks. We passed several villages this day, mostly in a ruined state, deserted by their Turcoman inhabitants, who were encamped upon the plain tending their flocks and herds, while thousands of storks were building their nests upon the walls and damaged trees in

the neighbourhood; we also observed other rare birds upon this plain, several grey Numidian cranes, and ducks of a beautiful red and brown colour.

At 10h. 30m. we began ascending, in a north-westerly direction, the low ridge of limestone hills on which the tumuli are situated, leaving the Gygæan lake on our right, filling up that part of the plain which stretches away towards the north. On reaching the summit of the ridge we had at our feet the whole extent of the unruffled lake, its marshy banks skirted with reeds and rushes, surrounded by hills on every side, except to the S.E., where it opens to the Hermus, in which direction its superfluous waters escape, and to the N., where the hills appear to sink away altogether.

One mile S. of this spot we reached the principal tumulus, generally designated as the tomb of Halyattes. It took us about ten minutes to ride round its base, which would give it a circumference of nearly half a mile. Towards the north it consists of the natural rock, a white horizontally stratified earthy limestone, cut away so as to appear as part of the structure.* The upper portion is sand and gravel, apparently brought from the bed of the Hermus. Several deep ravines have been worn by time and weather in its sides, particularly on that to the south; we followed one of these, as affording a better footing than the smooth grass, as we ascended to the summit. Here we found the remains of a foundation nearly eighteen feet square, on the north of which was a huge circular stone ten feet in diameter, with a flat bottom and a raised edge or lip, evidently placed there as an ornament on the apex of the tumulus. Herodotus says that phalli were erected upon the summit of some of these tumuli, of which this may be one; but Mr. Strickland supposes that a rude representation of the human face might be traced on its weatherbeaten surface. In

* This circumstance may have given rise to the observation of Herodotus that the foundation of the tomb of Halyattes was of large hewn stones.

consequence of the ground sloping to the south, this tumulus appears much higher when viewed from the side of Sardis than from any other. It rises at an angle of about 22°, and is a conspicuous object on all sides.

It is impossible to look upon this collection of gigantic mounds, three of which are distinguished by their superior size, without being struck with the power and enterprise of the people by whom they were erected, and without admiring the energies of the nation who endeavoured to preserve the memory of their kings and ancestors by means of such rude and lasting monuments. Hitherto, indeed, they appear to have escaped the destroying hand of conquerors; but the time and means at our disposal would not allow of our making any attempt to penetrate into the interior of any of these royal sepulchres; an undertaking, however, which would probably richly reward the speculator or the antiquary.

On leaving the tumuli our course for Sardis lay S. by W. six or seven miles over the sloping plain and downs, on which numerous flocks of camels were grazing. In the marshes below were many large herds of cattle and horses. About four miles from the Necropolis we reached the sandy banks of the Hermus, which we crossed with difficulty by a rather dangerous ford, the river being wide and rapid, and in some places deep. A mile before reaching Sardis we passed a Turkish burial-ground, in which were many broken shafts of columns and other fragments of ancient sculpture, but no inscriptions.

With the exception of a few black Euruque tents, the only habitation at Sardis is that of a Greek miller, who has taken advantage of one of the streams which flow past the Acropolis to turn the wheel of his mill, and in whose dwelling we were accommodated. A small river flows from the lofty range of Tmolus on each side of the ruins of Sardis, one to the east and the other to the west; but the latter, which comes down the broader valley, and passes by

the Ionic temple of Cybele, has generally been considered as the gold-bearing Pactolus.*

After examining the two massive buildings near the bottom of the hill, which appear to have been erected for churches in the early ages of Christianity, we ascended to the theatre and stadium. The lowest of them consists of several handsome marble piers, supporting brick arches; but the greater part of the brick-work is gone, enough only remaining to show the spring of the arches. It is nearly 200 feet long, its greatest length being from east to west, and having a semicircular termination, like the bema of the Greek churches, at both ends, but which does not appear externally. The other, higher up the hill, consisted also of brick arches raised upon six marble piers, made up entirely of architectural fragments plundered from former buildings. Corinthian and Ionic mouldings, shafts of columns, friezes, architraves, and fragments of entablatures, are all worked up together with a large quantity of cement: but four only of these piers are now standing.

Some travellers have too hastily concluded that this was the church of Sardis to which allusion is made in the Apocalypse, but besides that the expression can only have referred to the community of Christians then established, the nature of the structure above described shows that its date must have been at least posterior to the overthrow of the Pagan religion and the destruction of the temples, towards the end of the fourth century.†

The theatre appears to be of Roman construction; it is entirely built of loose rubble, except the wings of the cavea, which were faced with stone; the marble seats, the proscenium and scena, are all gone. Immediately in front, and crossing it at right angles, are the remains of the stadium, the northern side of which has been artificially formed by a wall supported on arches running along the side of the hill.

From hence ascending to the S.E. we soon reached a

* τὸν μίγαν Παχτωλὸν ἴυχρυσον. Soph. Philoc. 394.

† Gibbon, Decline and Fall, ch. xxviii.

level platform, on which were the foundations of a small square building, beautifully situated, and from whence we had a splendid view over the plain, bounded by the bold outline of the Phrygian mountains; while to the south the hills of the Acropolis towered up in wild confusion, having, from the soft nature of their sandy beds, been worn by snows and storms into a variety of fantastic shapes, whilst, wherever the roots could hold, the dwarf ilex, arbutus, and other shrubs flourished luxuriantly.

After some fatigue we reached the summit of the Acropolis from the east (the usual ascent is on the west), by a narrow winding path, scarcely ever before traversed, I should imagine, by anything but a mountain goat or a hungry jackal; but the crumbling nature of the soil prevented us from indulging in the idea that this might have been the path by which the Persian soldiers ascended to the capture of the citadel. Here we found the remains of walls and gateways of a fortress, probably Byzantine; for, like the two buildings below, they are chiefly made up of ancient fragments. Amongst them we found several inscriptions,* some of which have been already copied; but no trace of walls of Hellenic construction.

But the most interesting feature in the Acropolis, or rather what was the Acropolis of Sardis, is its rapid destruction by the continued abrasion of rains and torrents. The whole of the ancient summit is gone, with the exception of a narrow ridge defended by a double wall and perpendicular precipices, with a few detached pinnacles, only preserved from destruction by the fragments of broken walls still remaining on them. But even these are partly undermined; and a few more centuries of winter torrents and the parching suns of summer will bring them also to a level with the valley below; thus the whole will gradually crumble away, and bury in its fall the few remaining ruins of the ancient Sardis.

The view from this lofty summit was truly magnificent:

* See Appendix, Nos. 43 to 47.

to the north the Hermus, winding through its rich plain, was backed by distant hills and the broad expanse of the Gygæan lake; still farther to the west were the tumuli of the Lydian kings; while the continuation of the broken and rugged line of sand-hills which skirt the base of Mount Tmolus was prolonged to the east and west of the spot on which we stood. To the south were the snow-capped peaks of Mount Tmolus; while the deep intermediate space was broken into many hills and dales, either cultivated or covered with flourishing brush-wood.

As we descended from the Acropolis on the west we could perceive the manner in which the sandy soil of the hills has been washed away. High pinnacles and deep ravines cover the side of the hill, and the broken rocks almost assume the appearance of the walls and fortresses which they refuse to sustain. Two only of the gigantic Ionic columns of the temple of Cybele are still in their place to mark, with the huge fragments which lie about them, the grand proportions of the edifice. Many other remains are scattered over the area of the ancient town; amongst which the most remarkable is the so-called Gerusia, situated near the western limits of the city, partly built of brick and partly of stone, but of a late period; while to the west of these two walls are the massive marble fragments of another building, apparently of much older date.*

April 13.—Sardis to Cassaba six hours. At half-past six we left the miller's hut, and in about ten minutes crossed the Pactolus; its bed of yellow sand was nearly dry, the greater portion of the water having been turned off to irrigate the neighbouring fields. The road led along the foot of the sand-hills on our left, with the plain of the Hermus on our right; here we met the Chavasse-Bashi of the Governor of Magnesia, with a long train of attendants, on an expedition to collect the haratch, or capitation-tax, from the zinganis, or gipsies, who are said to be very numerous in

* See Appendix, Note A.

this district, and are generally spoken of with great contempt, as dishonest, and as having no religion.

At 8h. 40m. we passed the picturesque village of Achmetli, embosomed in trees and orchards; and a mile further observed several tumuli on both sides of the road. Near this spot the remains of walls and a causeway were visible in the sides of a small ravine, as if an ancient road had once been there. The country was flat and uninteresting, but well cultivated. At 10h. we passed three more tumuli close to the road, and at 10h. 45m. two more. The vague traditions attached to the history of these ancient records of a by-gone people gave additional interest to the rich and picturesque scenery on the left, consisting of wooded hills, with deep ravines, watered by considerable streams.

At 11h. 30m. we were under the village of Debrent, situated high up on the left, and crossed the wide bed of a torrent which brought down much detritus into the plain, having its stony banks and bed covered with oleanders and the agnus castus. At 12h. 18m. we passed a burial-ground with many columns and fragments of ancient sculpture. Mr. Strickland here caught a large snake as it was crawling across the road, having just devoured three enormous green lizards, which it was made to disgorge, without further injury to them than death by suffocation, as the snake had swallowed them whole.

As we approached Cassaba the ground was highly cultivated; and at 12h. 55m. we reached the Menzil Khana, where we were detained several hours, the horses being all in the marshes, according to the usual Turkish practice in the spring. Cassaba is a dirty town, with about 800 mud houses, but it is famous for its melons, which are much esteemed at Smyrna. Streams of water flow through all the streets, which, however refreshing it may sound, renders them the receptacles of filth and mud.

The requisite number of horses being at length procured, and their shoes carefully examined by the albahn or black-

smith of the Menzil, Mr. Strickland, anxious not to lose the opportunity of visiting Magnesia, and having already seen the pass of Kavakli Dere, determined upon going round by that town, while I proceeded direct to Smyrna with the baggage and our invalid servant.

Passing through the streets we met a gay and noisy marriage procession. The old and married men with their long beards were on horseback, followed by the young men, about thirty in number, who, marching on foot, picked their way in single file along the street. They were dressed à la Xebeque, and were armed with long daggers, hangers, and pistols stuck into their sashes, and a long gun swung over their shoulders. They were followed by a band of swarthy, gipsy musicians, which added greatly to their picturesque appearance.

Leaving the town, we traversed a flat and stony plain, sloping gently to the north; and after crossing a low ridge connected with the high chain of hills on our left, descended into a wide and fertile valley watered by the Ninfi Chai, which, rising considerably to the west of Ninfi, flows eastward until it enters the marshy plain of the Hermus. This valley was well cultivated, and the plain covered with fine walnut-trees, sycamores, and gigantic plane-trees, the latter flourishing near the banks of the river, and in stony spots subject to frequent inundations. Many tents of Turcomans, with their flocks and herds, were scattered over the rich pasture.

At 6h. 30m. we crossed the river, and ascended the low hills on our right, covered with brushwood, chiefly ilex and thorn, while the plain below was a thicket of luxuriant plane-trees. In consequence of numerous reports of robberies on the road, we halted for the night at a café, four hours from Cassaba, which we reached soon after seven. A large caravan of camels had already stopped there, and completely covered the ground in front of the café, in which I took up my abode for the night, sharing the single room with half a dozen Turks busily employed in smoking and watching our proceedings.

April 14.—We started soon after daylight for Smyrna, eight hours distant. Descending from the hills, we crossed and re-crossed the Ninfi Chai several times in the course of the first hour. These hills consisted of gravel, containing quartz pebbles and sand, and formed the boundary of the plain two or three miles wide, which extended to the lofty mountains on the left, forming part of the range of Mount Tmolus.

Half an hour's ride brought us to the ruins of an ancient bridge over the river, probably Roman. The upper part had been restored by the Byzantines or the Turks; but one pier and two arches at the eastern end have been since destroyed, while six arches still remain perfect. It would appear, from the direction of this bridge, that the ancient road only crossed the river once, viz. at this place, and then stretched across the valley considerably to the south of the present line. As we advanced, the ground was covered with limestone pebbles, derived from Mount Sipylus, not far off on the right.

At 8h. 25m. we saw the picturesque and pretty town of Ninfi, two miles distant on the right, and at the foot of the high hills which form part of Mount Tartali. The plain rose a little, forming a beautiful undulating champaign country, covered with turf, and dotted over with wild fruit-trees in full flower, such as apricot, wild almond, and wild pear-trees, with which the Judas-tree, with its deep-red flowers, also in great abundance, formed a striking contrast. The valley gradually narrowed; and at half-past nine, after recrossing the Ninfi Chai and, leaving it on our right, we ascended the hills to the pass of Kavakli Dere. This ridge forms the connexion between Tartali to the south and Sipylus to the north, and consists of argillaceous schist traversed by veins of quartz, dipping considerably to the north: it appears to underlie the dark hippurite limestone, which has been thrown off in the plain near Hadjilar by the violent convulsions to which it has been subjected.

A steep and stony road led to the summit of the pass,

which we reached at 10h. 15m., when a splendid view of Smyrna, with its bay and surrounding mountains, burst upon us. A rapid descent over hills covered with a variety of shrubs, chiefly arbutus of two species, ilex, myrtle, gum-cistus, and many others, brought us to the plain bounded by a range of dark fœtid limestone, containing numerous hippurites, on our right. To the left, about a mile off, was the pretty village of Bounarbashi, with the steep and wooded mountain of Tartali beyond it, where many deep and rocky glens afforded an inviting glance into its wild beauties, and picturesque, yet unknown, scenery.

After crossing the plain for nearly three miles we passed through a grove of pomegranates, now in great beauty and vigour. Apparently they had not been injured by the extreme cold of the preceding winter, although the orange and fig-trees had been almost all destroyed. As we approached Smyrna I was much struck with the careful cultivation, and rich and forward vegetation, so characteristic of this favoured Ionian climate.

We soon reached the caravan bridge, and after some battling with the Turkish douaniers and dependants of Hussein Bey, the grasping governor of Smyrna, I resumed my old quarters at Madame Marracini's, and again enjoyed the luxuries of chair and table, which I had not seen since I left Constantinople, and to the want of which I had not yet inured myself; although at a later period of my wanderings long use frequently made me regret the necessity of substituting them for the divan or mattress.

Thus ended our first excursion through the centre of Asia Minor; and, notwithstanding the early period of the year, and our ignorance of the Turkish and Greek languages, it was, on the whole, successful, fully answering the expectations we had formed, and repaying us, by several interesting discoveries, for the fatigues we had undergone. I was also pleased to find that by care and precaution, and a total abstinence from wine and spirits, I had escaped all return of the ague, from which I had suffered so much during the

winter. There is nothing that should be so strongly impressed upon all travellers in the East as the advantages to be derived from totally refraining from wine and spirits while travelling. The water is everywhere excellent, and there is no temptation to indulge in the use of the wine of the country. The little stimulus it might occasionally inspire, is dearly obtained at the risk of fever, ague, and diarrhœa, whilst, on the other hand, the disuse of it renders the traveller cheerful and light, and, when refreshed with a few hours' sleep, ready to be off early the next day. But it is not enough to confine his beverage to water and coffee; it is equally advisable, particularly while travelling during the heat of summer, not to drink cold water during the day, but to wait until the evening meal, which should be after sunset. This privation may be a little inconvenient at first, but is more than repaid by the advantages derived from not checking the perspiration which is going on during the day. The same objection does not apply to the use of warm coffee, which may be indulged in at all times; and the quantity taken at a time is so small, that the stomach cannot be overloaded.

We had succeeded in this journey in tracing the Rhyndacus from the lake of Apollonia to its sources, visiting the site of Hadriani, fixing those of Trajanopolis and Sebaste of Phrygia, and in ascertaining that the ruins at Suleimanli were those of Blaundus, not of Clanudda, a place which I believe never existed; and we had also obtained some information respecting the geology of the Catacecaumene, indicative of the close analogy between that district and central France. Mr. Strickland was now to return to England, and I had to determine in which direction I should next proceed. Circumstances soon decided for me, and led me off to the distant mountains of Armenia, from whence I returned to Smyrna by a new route.

CHAPTER XI.

Bournoubat—Return to Constantinople—Circumcision of the Sultan's Son—Hill of Boulgourlou—Voyage to Trebizond—Deleterious Honey—Leave Trebizond for Erzeroum—Jivislik—Azalea Pontica—Ascend to Karakaban—Retreat of the Ten Thousand—Descend to Stavros—Gümischkhana—Baibourt—Copper-Mines of Chalwar—Gurula—Descend to the Plain of the Euphrates—Reach Erzeroum.

AFTER the departure of Mr. Strickland I took up my abode for a short time in the delightful village of Bournoubat, or Vournōva as it is called by the modern Greeks, who do not pronounce the letter B. Here with the opening of May I enjoyed the return of warm and genial weather, and luxuriated for a few days in comparative rest and quiet. The early mornings were spent in making geological excursions on the hills above the village, and the evenings in exploring the more distant plains towards Hadjilar, Bounarbashi, or Ishekli.

But these occupations were suddenly interrupted by hearing of the arrival of a near relative at Constantinople, on which I left my temporary retreat, returned the same day to Smyrna, and on the next evening, accompanied only by my servant and interpreter, Giuseppe, was steaming down the gulf on board the Crescent, bound for Constantinople.

We quitted Smyrna on Friday, the 6th of May, and on the following morning were between Tenedos and the coast of Asia. I was much struck with the contrast between the two coasts; Tenedos being almost barren, and without a tree, while huge unsightly windmills near the town destroyed all idea of beauty, and even the hills had only here and there a shade of green; on the other hand, the continent of Asia was verdant and well-wooded, rich and extensive olive-

groves were spread over the lower hills, and the higher and more distant mountain-ranges were covered with coppice and forest-trees.

After taking on board some passengers at the Dardanelles, and passing the points of Sestos and Abydos, we reached Gallipoli, nearly opposite to Lampsacus. Here are the remains of a Genoese fortress in the centre of the town, which the Turks were pulling down in order to make use of the marble blocks and fragments which formed part of it for the purpose of building a fountain in honour of the Sultan. A European traveller, whom we took on board at the Dardanelles, assured me that many bas-reliefs and other pieces of sculpture had been found there, but were sadly knocked to pieces by the Turks. He also mentioned that a tumulus had lately been opened in the island of Tenedos, in which several small statues in marble, bronze, and terracotta were discovered, as well as some large pateræ. As we entered the Sea of Marmora the wind, which had been favourable, veered suddenly round to the north-east, and we did not reach the Seraglio Point until past three the following morning.

Preparations had long been going on at Constantinople on a large scale for the circumcision of the Sultan's son, which was to take place at a spot called the Sweet-waters of Europe on the 13th of May. I had already heard that ten or twenty thousand children of all ages were to undergo the same ceremony on this occasion, to each of whom the Sultan would present a suit of clothes. Being a religious ceremony, we were told that Franks would not be allowed to approach the tents, but we determined to try how near we could get by going up the river in a caik. The whole city seemed to be in a bustle, and every caikji (boatman) was in request; and after passing the mosque of Eyoub, and under the heights of Ramis Chiflik, a gay and brilliant scene opened before us. The ground on each side of the river was covered with tents in every direction, particularly on the left bank, where groups of gaily-dressed and idle Turks, both men

and women, were enjoying their *kieff* under the trees, while the river was literally covered with boats skimming rapidly over the surface of the water, and crossing and jostling and passing each other, whilst the rowers kept continually shouting one to the other how to steer in order to avoid collisions. The words they used were Anadolia and Roumelia, to signify that they should steer right or left, east or west —words derived from the constant traffic kept up on the Bosphorus, which separates the two continents. We ascended the stream without difficulty as far as the royal tent, which was open to the river, and in which the ceremonies were performed; but we were not allowed to land. The hills on the opposite bank were covered with parties of Turkish women in arrabahs, or seated on their carpets on the ground. Rope-dancers were exhibiting their feats in every direction; and a few dancing boys, in fanciful dresses and flowing locks, followed by a train of musicians, were moving about amongst the crowd. The tents of the Pachas, pitched on the opposite bank, and some Turkish beauties under the guardianship of black eunuchs, floating past in their gay caiks, and coming apparently from the Sultan's kiosk, added to the splendour and gaiety of the scene.

Strikingly picturesque as is all the scenery about Constantinople, there is none however to be compared with the view from the summit of the hill of Boulgourlou, or rather Tchamledji, a few miles to the east of Scutari, which I twice ascended during my present stay in the capital. As we reclined on the grass at the summit of the hill, looking out from under the branches of a clump of venerable plane-trees, forming an appropriate frame to this most lovely picture, we caught glimpses of several portions of the winding Bosphorus, which appeared like a chain of blue and tranquil lakes bordered by wooded banks. To the west was the whole mass of Stamboul, with its tall and graceful minarets and glittering domes, divided by the Golden Horn; while beyond it to the south the promontory of St. Stephano stretched far into the Sea of

Marmora, the southern shore of which was just perceptible in the blue hazy distance. Looking to the south were the fair islands of Principe and others, extending apparently in a line from N.W. to S.E. in front of the Gulf of Nicomedia, with the bold bluff promontory of Bozbournou beyond. The whole Ottoman fleet, moored in the Bosphorus off the palace of Dolma Baktchi, was not the least striking feature amongst those which excited our admiration. The hill itself consists of stratified quartz rock, overlaid, geologically speaking, by Silurian schists resembling those of the Giant's Mountain, crystalline limestone, and the micaceous sandstone of Constantinople.

Friday, May 20.—Having determined to accompany my friends as far as Trebizond, and thence to return through the more central portion of Asia Minor, I embarked this morning on board the Essex steamer, and soon after eleven we got under weigh. At Therapia we stopped a short time to take on board a detachment of riflemen on their way to Persia, under the command of Captain Wilbraham. All our fellow-passengers were, with one exception, English, proceeding with various objects, political, commercial, or scientific, to different parts of the East. The voyage, therefore, which was quite experimental (for, with the exception of the Pluto, which had conveyed Mr. Ellis to Trebizond the year before, no steamer had yet been seen on this coast), promised to be most agreeable. The shore, which we hugged the whole way, was extremely beautiful, and the weather was generally fine. Soon after entering the Black Sea I observed a considerable mass of basaltic columns near a point called Koumbournou (Sandy Head or Sandy Nose), with a partially fan-shaped structure, the columns appearing to spread out downwards.

May 21.—The wind was against us the whole day, but the weather was fine. I have since frequently observed on the southern shore of the Euxine that in fine settled weather the wind constantly blows from the east during the day. The whole coast was strikingly bold; lofty hills covered

with extensive forests stretched down to the water's edge, while occasionally broad valleys with steep cliffs on either side ran far up into the country. I was particularly struck with the bold appearance of Mount Sagra, the steep cliffs of which to the north-east rose high above the surrounding hills.

May 22.—On coming on deck this morning, as we were passing within two miles of Cape Lepte, a low, black, volcanic-looking coast, we saw the town of Sinope with its remarkable promontory about ten miles a-head of us. It is situated on the low and narrow isthmus which connects the promontory with the main, and is surrounded by a wall fortified with turrets at short distances from each other. A rich and well-wooded country appeared to extend to the south from the town. About forty miles beyond Sinope we passed near a low and thickly-wooded tongue of land, apparently marshy in places, running out into the sea, at the northern extremity of which were the mouths of the Halys; but their extent could not be seen in consequence of several islands which lay off them. The sea was much discoloured for six or seven miles before we reached the point; by the mud which the Halys had brought down, so that there could scarcely be any doubt that the whole of the long point was an alluvial delta.

May 23.—The morning was warm and hazy, and, as we approached the shore at Cape Yoros, the rain began to fall, which continued with much violence until we reached Trebizond, so that we only caught a few momentary glimpses of the coast. Steep hills, broken by many deep ravines, rose directly from the sea, dotted with cottages, and varied by a few patches of cultivation. The situation of Trebizond is very remarkable; it is built at the foot of a high range of undulating hills, sloping gently to the beach, and everywhere well wooded. The houses, outside the town at least, are interspersed amongst trees and gardens, and shown off by the dark green hills immediately behind them. To the east of the town on a small projecting rock are the

ruins of a castle, formerly the residence of a Pacha of Trebizond, but destroyed by the Porte out of jealousy, from its having too much the appearance of a fortification. The boats which came off to convey us ashore were flat-bottomed; and being equally curved upwards, both at the stern and the prow, had a picturesque and almost classical appearance. The rudder is semicircular, and rises far above the gunwale, so that the long tiller hangs almost perpendicularly for the helmsman to hold it, by which there must be a great loss of power.

Trebizond, like other Turkish towns, contains neither inns nor lodging-houses, but Mr. Suter, the British Vice-consul, hospitably entertained as many of us as he could. His house was in the Greek quarter, to the east of the walled town, in which Turks only were allowed to dwell. In the Greek quarter all the houses are surrounded with gardens, and the streets through which we passed were the narrowest I had ever seen. The honey of Trebizond still retains the intoxicating qualities which Xenophon and Strabo attributed to it in their accounts of its effects upon the Greeks in their retreat, and upon the soldiers of Pompey.* I even found that all the honey here had a very bitter flavour, although it is chiefly the wild honey which possesses such deleterious qualities. It is said to be produced by the bees feeding on the flower of the Azalea Pontica, which grows in great luxuriance on the hills above the town. Pliny says that the honey was extracted from the flower of the Rhododendron, which is also very abundant on the hills; but in this he may have been mistaken, for the flower of the Rhododendron has no smell, whilst that of the Azalea is very powerful and delicious, and therefore more likely to attract the bees. It grows, as I had afterwards an opportunity of ascertaining, all along the coast, and I heard in other places of the noxious qualities of the honey. This agrees with the observation of Pliny, who says that it was

* Xenophon Cyri Exp. iv. 8. Strabo, lib. xii. cap. 3, p. 549. Pliny, xxi. 13. Steph. Byzant. v. Τραπεζοῦς. See Appendix, Note B.

also found in the country of the Sanni, a people inhabiting the coast farther to the west.

May 24.—Having determined to extend my journey to Erzeroum, and thence to visit Kars and the ruins of Anni, before returning westward, I spent this day in making my preparations and seeing some of the most interesting objects in and about Trebizond.* The principal articles of trade in the bazaar were alum and copper brought from the mines in the interior. The latter comes in a rough state, and is here manufactured into different articles for domestic or culinary purposes.

Beyond the low hills on which the town is built, and a little to the south-east, rises a steep and almost insulated hill, forming a perfectly level table-land, from which the town of Trapezus must have derived its name. It is now called Boz Tepe (grey hill), and consists of trachyte of a bluish colour, partially covered with a tufaceous conglomerate, and beds of volcanic sand and lapilli, and in some places decomposing easily. I found in it numerous crystals of hornblende and tourmaline, and some of a cruciform shape.

The situation of the Turkish town is very picturesque, bounded to the east and west by rocky ravines of considerable depth, in all parts of which are rich and luxuriant trees, and well-watered gardens; while the summits are fringed with the venerable and time-worn ruins of the Byzantine walls, which, with their numerous turrets and battlements, peep out above the mass of foliage which almost hides the rocky banks. This part of the town is connected with the suburbs by a high and narrow bridge on each side, and is defended by strongly-fortified gateways, above which, and entirely occupying the ground between the two ravines, are the extensive remains of an old and picturesque castle, the outer walls of which are of very great height. On one of its ivy-clad turrets we found two or three brass guns in a very ruinous state. The castle appears to be Byzantine, and was probably the palace of the

* See Macdonald Kinneir's 'Journey through Asia Minor,' &c., p. 335.

Comneni, when they assumed the title of Emperors of Trebizond. It resisted the Turks for some time after the taking of Constantinople, but finally yielded to Mahomet II. in 1460. Among its ruins, bays, laurels, and rhododendrons were growing in wild luxuriance.

Returning through the town I observed a Greek inscription, in Byzantine character, over one of the gateways on the eastern side, and am indebted to Mr. Abbott, Vice-consul at Erzeroum, for a copy of it.* The lintel of the inner gateway on the western side is formed of a beautifully worked fragment of an Ionic frieze or cornice. The houses in the Turkish town are generally larger and better built than those without the walls, but have not the agreeable appendage of a garden. The population is stated to be about 20,000, but this is rather conjectural, as indeed are all notions of numbers in this country.

May 25.—Our departure was delayed long beyond the intended hour by the usual Turkish dilatoriness in bringing horses, the difficulties of choosing them, and the trouble of loading them when chosen. We required twelve or fourteen, and since many more would be wanted on the following day, the Turks, in order to spare their Menzil horses, had recourse to a most arbitrary proceeding, which ensured our getting the worst cattle in the place. The preceding day, when the Pacha had given the orders for procuring them, his chavasses had laid an embargo upon all they could find, and we afterwards understood they had seized nearly two hundred. Of course this was a great inconvenience to the owners, so that those who could muster a dollar or two bribed the agents of the Pacha to let them and their horses off. Thus all the good beasts escaped, and about twenty of the worst belonging to the poorest inhabitants were left for us.

We started at 9 A.M.; ascending the steep hills to the S. and S.S.E. of the town, the view of which, as we looked back, was highly picturesque. On reaching the summit of

* See App. No. 49.

the ridge I found the yellow Azalea Pontica and the purple Rhododendron in full flower, growing wild with great luxuriance, the former scenting the air with its sweet perfume. The soil was a soft volcanic breccia and sand, with decomposed trap or trachyte, which produced a fine red clay. Two miles south of Trebizond, after descending by a rocky and winding path into the deep valley of the Surmel, which falls into the sea two miles to the east of Trebizond, we passed by the tomb of a Turkish santon. It is usual for Mahometans to accuse Christians of superstitions, and to ridicule the Catholic practice of votive offerings, but here every bush around the santon's tomb was hung with scraps of rags, torn from his clothes by every Turk as he passed along.

The traffic on this line, which is the caravan road from Trebizond to Erzeroum, is always considerable; but, owing to the nature of the soil, and the heavy rains which fall all the year round near the sea, it is so cut up and poached by long trains of beasts of burden, as to be often impassable. To obviate this evil in part, a narrow paved causeway has been laid down in many places, where the nature of the ground required it most, but the lapse of years has reduced it to a most wretched state; and what between floundering in the mud on one side or the other, and slipping about on the broken uneven pavement, the baggage horses had great difficulty in getting along. Between five and six miles from Trebizond we reached the bed of the Surmel, and ascended the wooded and well-cultivated valley for several miles. Our direction here changed to S.S.W., and three miles farther on we passed a small village consisting, like most others on this road, of blacksmiths and bakers, for the convenience of caravans. At this village, a small bridge, covered with a wooden roof, crosses the Surmel, immediately above which another stream falls into it from a beautiful valley to the S.S.E.

At a quarter after one a stone bridge carried us across the Surmel, a deep torrent, flowing between igneous rocks,

and called by the people in the neighbourhood Khanlepenne. Trachytic and imperfectly columnar basaltic rocks occurred in several places; but about two miles farther, before reaching Jivislik, the river flows at the foot of a steep hill, 400 or 500 feet high, consisting entirely of a succession of masses or beds of columnar basalt, the columns of which are extremely slender, and very symmetrically arranged. At a quarter after two we reached the village, situated at the confluence of a large stream from the S.E., and the Surmel flowing from the S.W. Whilst halting here half an hour we watched several grey-bearded old men, whose sole occupation, as they walked about, was knitting and spinning wool for their stockings.

Leaving Jivislik, we quitted the bottom of the valley, ascending the wooded hills on our left, while on the other side of the river was the chiflik of a Turkish Agha, an independent country gentleman, once a Dere Bey, whose house was picturesquely situated on the summit of a wooded knoll commanding an extensive view of the valley. For three miles we ascended the hills, partly cultivated and partly wooded, until we reached the summit of the ridge which separates the two valleys above mentioned, of which that to the west is called Matchka and that to the east Meremana. For nearly three miles our road led along the crest, through the most beautiful scenery that can be imagined, and between thick woods of beech and fir, under which azaleas and rhododendrons, covered with a profusion of fragrant flowers, formed an impenetrable and luxuriant underwood, while the eye wandered over extensive hills and deep secluded valleys to the left, the summits of which were crowned with woods, while their sides were cultivated, wherever it was possible. Nature here appeared in one of her most fascinating garbs. As we advanced, the azaleas increased in number and in size, and the whole scene rather resembled a garden or beautiful shrubbery than a mountain in its native wildness. On reaching an elevation of 4000 or 5000 feet above the sea, the azaleas and

rhododendrons suddenly disappeared, a forest of gigantic beech-trees continuing still higher. But all vegetation had ceased, except a few stunted sycamores, before we reached the wretched hovel of Karakaban, a cold and dreary spot, consisting of a few huts, and a barn for the accommodation of travellers, where we arrived at 7 P.M.; the calculated distance being 9 hours or 27 miles from Trebizond, while the real distance is only about 20 miles S.S.W.

Ushered into a miserable hut, with a damp mud floor, on which we stretched our cloaks and carpets, we had great difficulty in avoiding the alternative of being frozen to death, or suffocated with smoke, and it was late before we could procure anything to satisfy our appetites after our long day's march. Muchtad Agha, the chavásse who accompanied us, was obliged to lock up the owners of the horses, and procure some men to sit up and watch them, to prevent their escaping during the night, so dissatisfied were they at being compelled to accompany us, though, to do them justice, they were civil and attentive to ourselves, who were the innocent cause of the annoyance they complained of.

Thursday, May 26.—Before starting, I endeavoured to ascertain the elevation of Karakaban, by measuring with Kater's circle the depression of the sea horizon, which was visible from this elevated spot. But the morning was hazy and the horizon not very clear, and consequently my observation not so correct as it should have been. The angle of depression was about 1° 12′, which gives an elevation of 5120 feet, but which I should imagine was rather below than above the truth. We left Karakaban a few minutes before six, still ascending by a bad and stony road; at every step the country became more bleak and barren, and the vegetation had not recovered from the effects of the snow, which was just melted. In fact, it was only within a few days that this pass had been open; and, on reaching the top, we had still to cross an undulating plain where we found several great tracts of snow, which caused us much delay, as the horses were constantly breaking

through the crust, and sinking up to the girths, when the drivers were obliged to relieve them of their burdens, before they could be extricated.

At a quarter after nine, six miles from Karakaban, we reached the spot from whence we saw the sea for the last time. On a rising knoll, about a mile to the west, was a large block of stone, standing upright on the summit, apparently surrounded by a mass of smaller ones. A hasty traveller might easily have taken it for the cairn erected by the soldiers of Xenophon, to indicate the spot whence they first saw the sea, supposing it not to be visible from any of the more inland chains; but an attentive examination of the narrative will destroy this hypothesis: for, in the first place, the Greeks were five days' march from the sea when it was pointed out to them, and the spot in question is not more than five-and-twenty miles from Trebizond. Secondly, they reached a considerable river, the boundary between the Macrones and the Scythines, the day after they had seen the sea; this river emptied itself into another still larger on their left hand, which they had to cross "δι' οὗ ἔδει διαβῆναι."* Now this description does not apply to any rivers between this chain of hills and Trebizond, but it does to that of Baibourt or to that of Gümischkhana. Thirdly, the Greeks reached the borders of the Colchians the third day after passing the river in question: here they were opposed by the inhabitants, drawn up on a lofty mountain, apparently part of the range of hills between Gümischkhana and Trebizond, but in all probability farther to the east than where I crossed it. Fourthly, after carrying the post occupied by the enemy, the Greeks were dispersed throughout the country in the villages, and here it was that they suffered from the effects of the maddening honey; this remarkable fact at once fixes the locality, for the azalea does not grow to the south of this chain of hills. The Greeks then, having driven the Colchians from their heights, descended to the villages where they could procure provisions, and

* Xenoph. lib. iv. cap. 8.

where, we are told, they found the honey. We should therefore look for these villages in those valleys and places where cultivation again commences, and the azalea, from which the honey was derived, flourishes; this, as I have before said, is only on the northern slopes of the mountain-chain nearest the sea. Xenophon then goes on to say that they reached Trebizond in two days' march, the distance being seven parasangs, which also agrees with the real distance of twenty or twenty-two miles from Trebizond to the point where the azalea ceases.

We must therefore adopt the idea that the Greeks first saw the sea from some more inland point. And when we recollect that they were led by their guide to this spot, from whence he had promised to show them what they had so long sighed for, it is more probable that he conducted them to some insulated mountain-top, than that the sea was visible from the pass, or other point of the chain over which their route would naturally have led them. I should be strongly tempted to look for the spot in the range of hills which extends between Baibourt and Ispir.

At ten our course changed from south to west, and we commenced a rapid descent between lofty and precipitous masses of igneous and granitic rocks, for a space of three miles, passing a strongly-impregnated ferruginous spring on the other side of the stream. The thick and turbid water bubbled up near the river, depositing a yellow sediment, and falling over a low stalactitic cliff which it has formed. After crossing the stream by a wooden bridge we continued S. by W. for three miles, until we reached Stavros. Here a little cultivation in the bottom of the valley again enlivened the scene; but the hill sides were bare, and only a few straggling poplars grew along the river banks.

From Stavros we descended a mile and a half in the same direction until the river was joined by another from the east, when we changed our course to east, and continued up its valley for half a mile, whilst the united streams flowed to the S.W., falling into the river of Gümischkhana

below. Then, leaving the river, we ascended the steep hills to the south, and, after a winding road for several miles over an equally barren and stony tract of country, we reached the crest of another chain of hills, which forms the northern limit of the valley of Gümischkhana.

The granite and igneous rocks near Stavros had been succeeded by a thick formation of indurated shales, limestone, and sandstone, dipping S. by W. at an angle of 35°, which in some of the ravines were penetrated to a great distance by eruptive masses and dykes of trap. We continued on this formation until we reached the summit of the ridge, when, on commencing the perilous descent towards Gümischkhana, the stratified rocks were suddenly cut off by a hill of porphyritic trachyte. The view towards the west was very extensive, its effect being increased by the contrast of light and shadows caused by an approaching thunder-storm which soon burst upon us in all its wild sublimity.

Looking back from the foot of the mountain at the chaotic mass of broken rocks which we had descended, it seemed impossible for the ingenuity of man to have found a path over such rugged ground, down which even our chavasse had thought it prudent to dismount. Another mile, of easier descent, brought us to a stream, which we followed to its junction with the river of Gümischkhana; the air was strongly impregnated with the pleasant but rather sickly smell of the wild barberry, now in flower. Our road led between the stream on the right, and lofty trap rocks on the left, covered with an efflorescence of sulphur; but soon after reaching the Gümischkhana river we crossed it by a fine stone bridge of a single arch, and of considerable span, and continued S. by E. for about two miles, winding up a valley confined by lofty mountains, between gardens and orchards in the highest state of cultivation. Here everything seemed backward, and the fruit-trees were only now putting on the first blush of spring; amongst them quinces, apricots, cherries, and walnuts, were most numerous. At

six we reached a small café in the suburbs near the river-side, having left the town itself nearly a mile behind us up a steep ravine to the right.

The silver-mines of Gümischkhana are amongst the most celebrated in the Turkish dominions, and are looked upon as the school where the art of mining is best taught; it is, moreover, the district which furnishes miners for all other parts of Anatolia. I was most anxious to see them, but my companion being hurried, I put off my visit until my return.

Friday, May 27.—Wishing to reach Baibourt to-day, we determined to set out early, the distance being 14 hours or 42 miles. We left Gümischkhana at five, and, after crossing to the right bank of the river, ascended the valley E. by S. for nearly six miles; at first between a succession of beautiful gardens and orchards. When we were clear of the gardens, the air was deliciously scented with the perfume of a tree in full flower growing abundantly along the banks of the river. In appearance it closely resembled the willow; the leaves had the same colour and the same villosity on the under side; the smell of the yellow flower, which was small and cruciform, resembled that of the jessamine; and although I occasionally found it wild in other parts of Asia Minor, it was long before I discovered it was the jijiva, or jujube tree. I should, however, think it must be sufficiently hardy to grow in England, where it would be a great ornament. The low, flat-roofed, and almost subterranean houses had a strange appearance; built against the steep hill side, they require only one wall in front to support the roof, which on the other three sides rests on the ground. Like many of the Armenian villages, these hovels are so low that you may ride on the roof without knowing where you are.

The rock on this side of the river was a reddish, large-grained granite, with a great tendency to decompose, and containing, in some specimens of it which I collected, vesicular hollows. As we advanced it appeared to pass into pro-

togine, the débris of which filled all the ravines, and formed a sloping talus at the foot of the cliff. At half-past seven we passed a group of remarkable conical hillocks, consisting of thinly laminated calcareous sinter or travertine, and which have been produced by the successive deposits of a calcareous spring, still flowing, and in the act of forming another cone in the immediate neighbourhood. It is probable that, when the deposit from the water had raised the sedimentary tumulus to a certain height, the spring flowed with less rapidity, and with so much less force that the old vents became gradually choked up by fresh deposit, and the water was forced to seek a new opening, where it continued to deposit its laminated matter as before, until a fresh hillock was produced, and the same process again renewed. The spring now rises about fifty yards to the east of the old mounds, having commenced forming a new one. The water which I tasted was not very cold, but strongly chalybeate, and, in a civilized country, would probably be turned to a better purpose than forming such gigantic mole-hills. About a mile farther we passed a village situated on a low hill of calcareous tuff, probably deposited by similar mineral springs in former ages.

Near the eighth mile we halted to allow the baggage-horses to come up with us at an Armenian blacksmith's forge. I have seldom seen such a wild and savage-looking set of beings. For some time we could not make out who or what they were: by degrees, however, we learnt that they were Christians, although they seemed afraid of confessing their religion. The valley was still without trees, with only a few occasional patches of cultivation, and gradually becoming more contracted. At the eighth mile we crossed another considerable stream, flowing from the N.E., and ten miles farther on another from the S.W. Here began a picturesque and narrow passage between lofty limestone rocks on either side; amongst which, in searching for fossils, I could only find the fragment of a large ammonite. From hence we emerged into a plain, surrounded by high

hills, still having the river, now much reduced in size, on our left, and between the thirteenth and fourteenth miles we entered another wild ravine, no less interesting for its scenery than for some of its geological details. On the left beetling cliffs rose to a stupendous height, the summit of which was fantastically broken into pinnacles and pointed rocks, on one of which were perched the ruins of a castle. On our right the river was flowing in the bottom of a deep chasm, beyond which were the same rugged limestone rocks, but not so lofty, forming an almost perfect amphitheatre, with a wild chaotic mass of rocks in the centre. As we advanced the road led over a large mass of porphyritic trachyte or trap, which, rising up in the centre, had thrown off the limestone beds in this irregular manner, and through the shattered strata of which the river has since forced its way, making for itself at the same time a passage through the porphyritic rock beneath. The limestone cliffs to the left are at least 1500 feet above the river, and, with the picturesque castle on the summit, form a striking feature in the surrounding scenery.

We still continued the ascent of the valley, with the river on our right hand. At the seventeenth mile we entered a succession of deep and narrow gorges, amidst greenstones, traps, and other igneous rocks, until, at the twentieth mile, we reached the barren summit of the ridge or watershed which separates the streams which fall into the Tchoruk below Baibourt from those that fall into the river of Gümischkhana; from this ridge we descended east by south into a wide and partly-cultivated valley, bounded by limestone hills on either side, in many parts horizontal, but at times offering remarkable contortions, produced by igneous rocks, protruded in several places. Not a tree was to be seen along the whole descent. At three we reached the village of Balahore, twenty-eight miles from Gümischkhana, inhabited partly by Armenians, and partly by Turks, who appeared poor and destitute, and from whom with difficulty we procured even a few eggs.

From Balahore to Baibourt the distance was ten miles in a direct line over an undulating and barren country, but affording good pasture to flocks and cattle. The peculiar pointed form of many of the small bridges is remarkable, in which the crown of the arch rises to such a height that a horse has much difficulty in reaching the apex; whilst the descent on the other side, equally difficult and dangerous, is rendered still more alarming by the almost universal absence of parapets. After wandering in the dark over the hills we reached Baibourt at half-past eight, and were obliged to establish ourselves in the room of the Menzil Khana, after ejecting the prior occupants.

Saturday, May 28.—The Saracenic castle of Baibourt, situated on a high hill to the east of the town, had an imposing appearance; but I reserved my examination of it until my return from Erzeroum. The Tchoruk Sú, flowing from the S.E., washes the foot of the castle hill, having neatly-cultivated gardens on its banks, along which were many lofty poplars, in whose branches a colony of herons had established themselves. It was seven A.M. before we procured horses to take us to Erzeroum, and at half-past seven we began to ascend the left bank of the river, which flowed for many miles through a narrow plain, between thick and impenetrable coppices extending a quarter of a mile on each side of the river. These are said to contain a great variety of game, wild boars, deer, &c. The roads were excellent, and we passed many carts drawn by oxen.

At half-past ten we quitted the plain, ascending a narrow valley on the right, to visit the copper-mines of Chalvar, and reached the smelting-houses in about half an hour. The shaft of the mine was close at hand, and I was tempted to descend it, in spite of the dirty appearance and exhausted look of the boys who were bringing up the ore. Its depth is said to be 240 fathoms. At first the descent, although wet and dirty, was neither difficult nor steep, but it soon became extremely narrow and almost perpendicular, twisting and winding in every direction, and lead-

ing from one platform to another by confined perpendicular chimneys; the heat and oppressive atmosphere rendering still more disagreeable the other difficulties of the descent. In some places we had to scramble down the chimneys, hanging by our arms as we dropped from one piece of wood to another, in almost total darkness, through mud and heat. The ore occurs in nodules, irregularly dispersed through a thick bed of blue shale. After inspecting that part of the mine where they were at work, I prepared to return; and if I found the descent difficult, the ascent was a thousand times more irksome, so that I was extremely exhausted before I again reached the open air. Sir H. Bethune, who had found considerable inconvenience in descending the narrow passages, had soon returned, and, whilst I was struggling in the shades below, had obtained from the inspector the following information respecting the expenses and produce of the mines:—They give employment to 500 persons, *i.e.* 350 men and 150 boys; the former receive four, the latter two, piastres per diem. The quantity of copper produced annually varies from three to four thousand mauns; each maun weighs six okes, and is worth eighty piastres, the oke being equal to two pounds and a quarter. Twenty mauns of charcoal, which cost eight piastres, are necessary in the different processes of roasting and smelting to produce one maun of copper. The ore, which appears particularly rich, is roasted four times, in order to drive off the sulphur before it is smelted. It is brought up, together with the shale, from the bottom of the mine, on the backs of young boys, who are employed in preference to men, on account of the narrowness and smallness of the galleries; and I was surprised to see the alacrity with which, after throwing down their burden, and resting for a minute or two to recover their breath, they started again on their downward passage.

On leaving the mines we crossed a low range of hills to the east, which brought us back in about half an hour to

the valley of the Tchoruk, along which we continued, until we reached the Armenian village of Massat, at three P.M., distant six hours from Baibourt. At a little distance the fifty or sixty underground houses, of which the village consisted, could only be distinguished from the smooth hill side by the square holes which serve as doors and windows, while the roofs were completely covered with herbage, affording pasture for the cattle. It was also singular to see both man and beast disappear in their troglodytic dwellings, like rabbits in their holes. The filth of these subterranean habitations was indescribable. We were shown one of the best and largest, but it served for stable as well as dwelling, a small portion being railed off and raised for the bipeds, whilst the rest was littered down for the quadrupeds. Over this larger portion there is generally an ingeniously-constructed opening in the wooden roof. The villagers complained much of the increased price of provisions since the Russian war, and mentioned, as instances, that a sheep which was formerly worth 14 piastres could not now be obtained under 60; and that the value of an ox was raised from 40 to 120 piastres.

May 29.—So completely was sleep banished by the attacks of vermin of various kinds, that we roused our people soon after two, and prepared to quit a scene of so much misery. By half-past four the baggage-horses were loaded, and we bade adieu to Massat in a most refreshing and cleansing rain, which did not last long enough to be disagreeable. Proceeding E.N.E. we rejoined the valley of the Tchoruk in about two miles, and then continued along its banks for about three miles farther. At half-past six we left the Tchoruk, and ascended a narrow lateral valley to the right, where we fell in with a large caravan from Persia: in it were many fine mules, whose appearance indicated that they were a valuable property. For nearly three miles we had the stream on our left, flowing with many and sudden windings through the meadows. A little way on we passed a small chalybeate sulphureous spring, in the act of forming

a conical white calcareous mound, resembling those before described.

At seven we crossed the stream, and, turning more to the east, travelled over an undulating grassy upland, covered with excellent pasture, and surrounded by lofty mountains. Several caravans had bivouacked here during the night for the sake of the pasture, and the owners were now loading their beasts preparatory to a start. At eight we forded a rapid river flowing N.N.W. to the Tchoruk, if indeed it be not the main stream itself; then turning suddenly to the S.S.E. we ascended the narrow valley, down which it flows between precipitous cliffs rising perpendicularly on both sides to a height of more than 500 feet. This narrow gorge, about a mile and a half in length and not 300 feet in width, is a very remarkable feature; the stratification of the rocks, which consist of indurated shales, sandstones, and calcareous marls, is quite perpendicular; and the gorge, which has probably been formed by subterranean agency, is exactly at right angles to the strike of the beds, which is from E.N.E. to W.S.W. We were obliged to cross and recross the river several times, and at a quarter after nine our course, after winding over marshy grounds and crossing several small streams, became east; when we passed some Illyaut tents, between whom and the Euruques of the western parts of Asia Minor there seemed to be no perceptible difference. Our road then led for about two miles and a half along a narrow plain, abounding in excellent pasture, until, turning S.S.E., we entered another lateral valley, and, after a steep and winding ascent, reached the summit of a lofty chain of barren mountains on which much snow was still lying, their height being at least 9000 or 10,000 feet above the sea. They form the watershed between the basin of the Euphrates and the streams which fall into the Euxine.

From this narrow ridge we descended a rocky valley, amidst wild mountain scenery, to the miserable village of Gurula, or Kebhúr, our course varying from south to south-east and east. We reached this spot before one, but, in

consequence of a violent thunder-storm, our baggage did not arrive for several hours. In the dreary prospect around us we saw neither trees nor verdure, and the village was, if possible, worse than Massat. The inhabitants were Mahometans; but the eleven families which it contained before the Russian war were now reduced to five. Our descent from the summit had been very considerable, and yet we were still at a great elevation above the plain of Erzeroum, which we imagined we could see in the far-off distance to the south.

May 30.—We left our inhospitable abode soon after four A.M.: descending in an easterly direction we entered a valley watered by a rapid stream flowing south into the plain of the Euphrates. We crossed this torrent by a bridge, formed of a single tree, cut flat, but without a parapet, and, trusting to the sagacity of our horses, rode over it in safety. After descending the valley for nearly two miles we climbed the low hills on our left, and at six A.M. found ourselves on the gently-undulating pastures which bound the great plain of the Euphrates. Here we put our horses into a gallop, and did not pull up until we reached Erzeroum, a distance of nearly twenty miles. We passed rapidly through several Armenian villages, where I was much struck with the wretched appearance of the inhabitants; the women in particular were most unprepossessing, extremely short, square-built, and high-shouldered, with remarkably distorted countenances and enormous mouths. Their dwellings were chiefly subterranean, and their numbers small. The rain fell in torrents, and made the road deep and muddy as we approached the centre of the plain.

At a quarter after eight we crossed the Euphrates, or Fraat, or Kara Sú, as the Turks sometimes call it, by a handsome stone bridge of several arches. It was even here a large and rapid river, although the southern branch, called the Morad Sú, is generally considered as the principal branch of this celebrated stream. The plain of the Kara Sú, which

is here eight or ten miles wide, and about double that distance in length, is surrounded on all sides by abrupt and lofty mountains; in the neighbourhood of the river the ground is wet and marshy, the soil in general is a rich alluvial clay, and not a doubt can exist of the whole plain having been once a lake, before the Euphrates burst through the mountain ranges lower down. The great drawback to the beauty of the country is the total absence of trees or wood of any kind, whether on the plain itself or on the surrounding hills. At a quarter after nine we reached Erzeroum: the low and flat-roofed houses of this city are built entirely of mud, with terraces of the same materials, but more than half of these are in ruins, and the narrow and filthy streets are more infested with savage dogs than those of Constantinople. These animals, however, make invaluable scavengers, and are more necessary here than in the less elevated districts of Asia Minor, which, during the summer, are visited by thousands of vultures. We rode up to the house of Mr. Abbott, who was then Mr. Brant's vice-consul, and from whom and his companions we received a very cordial welcome.

CHAPTER XII.

Neighbourhood of Erzeroum—Journey from Erzeroum to Kars—Ford the Aras—Parallel roads—Hassan Kaléh—Khan of Keupri Kieui—Khorasan—Fear of robbers—Bardes—Mountain of Obsidian—Kars—Hadji Veli Kieui—Reach Anni—Description of the ruins.

I REMAINED several days at Erzeroum, in the intention to visit Kars and the ruins of Anni, on the frontiers of Georgia, before I again turned my steps towards the west. I had wished also to explore the sources of the Euphrates at Domli; but the roads were still in so bad a state, and the country so flooded, that I was obliged to give up this part of my plan. Erzeroum itself contains little to detain a traveller. The most interesting objects are the remains of two Armenian churches and the ruins of the castle: the neighbourhood is barren and uninteresting. I rode out occasionally, and explored the hills to the south, which consist of trachytic and other igneous rock, the débris of which have formed a considerable talus, stretching nearly two miles into the plain towards Erzeroum. A hollow in the hills about two miles from the town, which has much the appearance of an amphitheatre, seems, from the perpendicularity and altered nature of the stratified rocks, and the variety of igneous rocks, to have been the crater of a volcano during the period of trachytic eruptions. On these hills I saw many coveys and pairs of the bagrakala or attagen, but so wild I was unable to get a shot at them.

The most remarkable building in Erzeroum is called the Chifteh Minarey, from two lofty minarets, now in ruins, which have been built on each side of the principal entrance. They are of a totally different style from the building itself, and are formed of small coloured bricks and glazed tiles, and deeply fluted, so as to bear a strong resemblance, I am told, to those which are often seen in Persia. The building

itself appears originally to have been a church of the same character as those which I afterwards saw at Anni, and may therefore be called Armenian; it was built before the Tartar conquest in the eleventh century, when Anni and Erzeroum were both plundered by Alp Arslan, and when no less than 300 churches were destroyed in the latter town alone.

The architecture is a modification of Byzantine and Saracenic. The pilasters and cornices are covered with arabesque tracings and sculptures. On each side of the central nave are two rows of low round arches, supported by short plain columns with low capitals; within the side-aisles are doors leading to several small chambers, with varied arabesques and ornamental work round each doorway. On each side is a gallery over the aisles leading to another set of apartments, similar to those below, but not so highly decorated. Some years ago a large collection of ancient armour, helmets, &c., was preserved here, but it was plundered by the Russians. The building, however, is still used as a kind of arsenal, and we found several of the small rooms full of military rubbish,—cuirasses, helmets, broken bows and arrows, powder-horns, &c., of every variety of shape and form,—while heaps of cannon-balls and a few broken gun-carriages filled the apartments below.

The principal entrance is to the north; at the opposite end is a chapel, built of white alabaster, much more elaborately worked than the rest of the building. It contains, as our guide informed us, the tomb of Chatoniyah, Sultan of Iran, by whom the mosque is said to have been built 570 years ago. It was probably at that time that the ruined Armenian church was converted by this prince into a mosque, and the two beautiful minarets were erected; for I do not believe that it was originally built for Mahometan worship. The alabaster chapel may also have been added at the same period. It contains six lofty niches, alternating with six low ones, and is richly ornamented with arabesque traceries; but it appears never to have been completed, as the decorative work is only finished a short way up the

pilasters and sides of the niches, no two of them to the same height; the patterns, too, are different in each niche, the concave-vaulted roofs of which are enriched in a style not unlike that which we call Gothic. I am, indeed, inclined to think that this peculiar Armenian style, being in great part a combination of Byzantine and Saracenic, forms a connecting link between them and that which was introduced into Europe about the twelfth century, and which was, I have no doubt, derived from the East, notwithstanding its northern name. Underneath the chapel is a very beautifully constructed vault; it contains four niches, from each of which an arch springs, which, all meeting together in the centre, produce an intersection of pointed arches.

On each side of the principal entrance, which is richly decorated in the Saracenic style, is carved a two-headed eagle, supported by a plume of feathers springing out of a crescent, from under which rise up on each side the neck and head of a dragon. On one side of this grotesque emblematic figure is another plume of feathers rising out of a sun. The masonry in this, as in the other building, called Bir Minarey, is extremely perfect; the stones, which are generally large, being fitted together with the greatest precision. There is only one minaret at the other building; but the style is the same, and the side of the entrance is also enriched with carvings of eagles and suns and lions, resembling those before described.

The town is surrounded by a wall, which is in some places double, and provided with embrasures. But the Russians carried off the guns when they were last here, leaving only a few dismounted pieces in the now dismantled citadel, and which are used occasionally for firing the salutes at the Ramazan. The citadel itself, which is nearly in the centre of the town, is in ruins; it is surrounded by a double wall, flanked by bastions, on which a few brass guns still remain. A part of the castle was used as a prison, and in one of the inner apartments is a deep dungeon with an iron grating, into which prisoners intended for execution were taken to

be strangled. The principal gate of the town opens to the plain on the S., and is called the gate of Erzinghan. Over it are some rude Greek inscriptions of the Byzantine period; the characters are very irregular and at a great height; they have been whitewashed, and most of the letters are illegible; but in one I could make out the commencement, which was †ΗΠΟΡΤΑ. . . . .

The view from my window gave a good idea of the general aspect of the town. It appeared as if a grassy plain, with a dome or mud-wall occasionally rising upon it, extended to the foot of the green hills beyond, and on which a small white tent or two would now and then appear to be pitched. This, however, was only the flat mud roofs of the opposite houses, all on the same level, and on which grew a rich crop of grass, where an ass might sometimes be seen grazing. The white tents were nothing more than little paper skylights, high in proportion to their sizes, for the purpose of admitting light into the gloomy apartments below.

The principal manufactures of Erzeroum are in iron and in brass. A considerable transit-trade is carried on with Persia, to which a great impulse has of late been given by the introduction of steam navigation between Constantinople and Trebizond. Persia exports a large quantity of silk and cashmire wool, both raw and manufactured, in return for which, cotton, woollen manufactures, and colonial produce are imported. I was informed that, on an average, 6000 packages of British manufactures annually pass through Erzeroum, each valued at 50*l.* sterling, which gives a total value of 300,000*l.* worth of goods, while the value of the exports is nearly the same. A large proportion of these goods are subsequently smuggled into Georgia, notwithstanding all the endeavours made by Russia to prevent it. The workers in brass and iron form a numerous community, and are celebrated throughout Turkey. In brass, they make a great variety of drinking-cups, candlesticks, &c., whilst in iron their principal manufactures are swords and horse-shoes;

the latter are sent in great numbers to Persia, which is, indeed, almost supplied from hence. One family of smiths, known by the name of Yedi Kardash (seven brothers), has acquired a very extensive celebrity. Good horses may also be obtained here from the Turcoman tribes in the neighbourhood. I purchased a spirited grey horse, about fifteen hands high, very fast and strong, and well made, for 1200 piastres, or 12*l.*, which carried me during the whole summer perfectly well.

The winter at Erzeroum is extremely severe, as might well be expected, from its great elevation above the sea, which has been estimated at about 6000 feet, the height of the barometer varying from 23·50 to 24·00 inches. When we arrived there in the beginning of June, the corn was only just appearing above the ground; and yet so great is the heat of the sun during the short summer, that it would be necessary to have recourse to an extensive system of irrigation to prevent it from being burnt up before it reached maturity.

Tuesday, June 7.—I started for Kars soon after noon, in company with Colonel Macintosh, to visit the ruins of Anni; and, having taken leave of our hospitable friends, we passed through the gate of Erzeroum, which merely consisted of the two side-posts between two mounds of mud, the effects of Turkish idleness grafted on Russian conquest. For two miles our course was east, between low hills, crossing several small streams, flowing north towards the Euphrates; after which, for nearly four miles, we travelled over low, barren hills of thinly-laminated calcareous marls, capped with peperite, and overlaid with huge boulders of lava, basalt, and basaltic conglomerate. At half-past one we reached the summit of the ridge, stretching nearly north from the high range of hills on our right, and separating the plain and district of the Euphrates from that of the Araxes. From thence we descended by a winding, rocky road into the plain of Hassan Kaléh, the picturesque castle of which was visible from afar. Soon after two we crossed a

shallow and small stream, flowing N.N.E. over a wide stony bed, and apparently one of the principal sources of the Aras or Araxes, which flows from west to east through the plain. At half-past two our course was nearly due east; the hills on our left gradually receding as we obliquely crossed the plain until we reached the village of Borja; thence we continued E. by N. six miles to the banks of the Aras, passing many large herds of cattle and brood-mares grazing on the plain. We also fell in with a party of Georgian travellers, whose superior manners and civility as compared with those of the Turks were very striking, and whose dresses, although picturesque and peculiar, bore a closer resemblance to those of Europe.

We forded the Aras in several branches; it was here a considerable stream, and deep enough to reach our saddle-bags. In the marshy grounds on each side of the river grew a few dwarf willows and wild roses; but, with this exception, we had not seen a tree or a shrub, either in the plains or on the hills, since we left Erzeroum. A total want of wood of almost every kind seems to be the peculiar characteristic of this elevated part of Armenia. Near Hassan Kaléh a range of hills from the north approaches the river; on their rounded sides distinct lines of parallel roads or beaches are very perceptible, some of which extend for nearly two miles, following all the sinuosities of the hills, and marked in many places by the grass appearing of a richer green, which confirms the opinion that this plain must have been at some remote period a vast inland sea or lake. Another mile brought us to Hassan Kaléh, surrounded by a double wall, defended by battlements, apparently Genoese or Byzantine. The town itself was miserable; three-fourths of the houses were in ruins; and we were housed, not however without some passive opposition, in the Agha's Konak. To the east of the town we visited the ruins of a strong and well-fortified castle, built upon an insulated mass of porphyritic trachyte. It is surrounded by a double wall, except to the east and south, where the

face of the rock is almost perpendicular. It was dismantled by the Russians, who carried off its guns. Here we found a large stone lying edgeways on the ground, of which we could not divine the use, neither could the Turks inform us, for they said it was there even before they had possession of the country. It is about four feet long by nearly two wide, having a large hole cut through it at the bottom, with knobs projecting at the sides and on the top, and may possibly have served as an altar in Pagan times. We did not visit the hot-springs which rise in the plain on the south side of the Aras, about a quarter of a mile from the town, and which are used by the Turks for hot-baths.

Wednesday, June 8.—Hassan Kaléh to Khorasan eight hours. We bade adieu to the hospitable Agha at half-past six A.M., and, after passing under the castle rock on our left, soon found ourselves again in an extensive plain. Here also I observed slight traces of the parallel beaches or roads on the hills to the left, as they stretched away towards the north-east. Crossing the plain we saw for the first time oxen used as beasts of burthen; they are chiefly employed in transporting corn from Georgia, but carry very small loads. This plain is watered by numerous streams flowing from the mountains into the Aras. After proceeding six miles to the east we began ascending low hills, on which were further traces of the shores of ancient lakes, with the same appearance of parallel banks. Three miles further, over gently undulating hills, brought us to the small village of Keupri Kieui, a few hundred yards beyond which are the ruins of an ancient khan or caravanserai, built, in rich Saracenic style, of solid stone, once cased with good masonry, the greater part of which has been removed. Each side is defended by four round towers, while the entrance is from the south through an outer and inner doorway. Over the outer doorway are handsome arabesque carvings, above which the wall is hollowed out like the upper part of a Gothic niche. The inner doorway is ornamented in the same style, but not so richly. Within

is a vast vaulted stable, about twenty-five feet high, and with five rows of arches on each side.

I have been told that there is, or has been, a line of these splendid khans, extending the whole way from Trebizond to Tabreez; and an opinion has gone abroad that they were erected by the Genoese when they possessed the trade of this country, and that a line of fortresses existed along the same road for the purpose of defending their caravans against the attacks of predatory hordes, and of keeping up their line of communication. To the Genoese also are ascribed the castles of Trebizond, Baibourt, Ispir, Hassan Kaléh, and perhaps Erzeroum, and others with which I am not acquainted. I cannot, however, agree with this opinion; for, whatever may be said respecting the origin of the castles of Trebizond and Hassan Kaléh, those of Baibourt and Ispir, as well as the khan near Keupri Kieui, are decidedly Saracenic, and I have no doubt they are of a much earlier date than that of the Genoese or other European settlers in this country.

Leaving the khan, the road is soon confined to a narrow pass between high hills on the left and the river on the right, beyond which is a bridge of seven arches over the united streams of the Aras, or Passan Sú as it is here called, and the Bin Ghieul Sú, from the south. At the bridge where we left the great road leading across the river into Persia, by way of Diadeen and Bayazid, our direction changed to E.N.E., over an open alluvial plain, containing large pebbles, and boulders of greenstone, basalt, &c., which appear to rise up through the hills of indurated sandstone, by which it is bounded on the left. At twelve we again approached the river, and ascended low hills of lacustrine sands and gravels, over which we rode four miles due east, the ground sloping gently towards the river, which flows through an extensive plain on the right.

At one we passed a small mountain stream, in which we saw a few fish totally unknown to us, but we had no means of ascertaining what they were. These hills were covered with

many beautiful flowers, particularly a species of orchis and an iris. The river on our right gradually receded until, at a quarter after two, we reached Khorasan, a small village, where the Oda afforded us a clean and comfortable lodging. Low hills of fluviatile or lacustrine gravels and sands, of various colours, occurred to the north of the village, containing pebbles of basalt and lava.

Thursday, June 9.—Khorasan to Bardes ten hours. We started at six A.M., and continued N.E. for nearly two miles across the plain, when we began to ascend the hills of sand and gravel, of the same formation as at Khorasan, containing numerous small fragments of black obsidian or volcanic glass, and soon reached the summit of an insulated table-land, which proved that these hills must once have been at the bottom of an extensive lake; for, notwithstanding the vast denudation, the effects of which were visible in the many deep ravines and valleys, and which probably took place, not gradually, but at the period when the barriers of the lake were broken down, the summits of the several plateaux preserved one general level, proving that they had been once continuous. The beds had a slight inclination towards the west, except the upper one, which was perfectly horizontal, and in which I found numerous traces of comminuted shells, but none sufficiently perfect to be extracted entire. They belonged chiefly to one species, apparently mytilus or avicula, with a few small univalves. As we advanced, the Aras gradually receded from us, flowing to the east; while we continued for nearly four miles more to the north over undulating hills covered with verdure, amongst which, however, we perceived no grasses; the vegetation consisted entirely of wild flowers, which in a few short weeks would be quite burnt up.

A little before eight we descended into a narrow valley, watered by the Kara Sú, or Blackwater, a deep and rapid river, flowing from the N.W. We ascended the valley for half a mile in order to reach the bridge, and found a few small shrubs growing on the banks. Having crossed the bridge

we ascended a steep and stony mountain, round the western extremity of which the Kara Sú has worked itself a narrow bed. These hills consist of a grey and reddish porphyritic trap, at times alternating in wavy lines. We reached the summit of the ridge at nine A.M., and commenced a rapid descent into the valley of the Kara Sú, which was flowing far below us to the left; here I observed many large blocks of yellow jasper-looking rock near the junction of the trap with the stratified rocks, resembling those near Koula and Bournoubat, which were to all appearance an altered rock. At the village of Hadéh we turned to the north again, and thence descended to the Kara Sú, which we reached at a quarter after ten. The rocky cliffs on the other side of the river had a singular and picturesque appearance with a ruined castle perched upon one of their summits. This rocky ridge extending some way to the N.E. was fantastically broken into a variety of singular forms and lofty pinnacles; but the road being considered dangerous on account of the Kurds, I was unable to examine either it or another mass of similar conical hills, which covered a large portion of the hill on the right; but they appeared to have been caused by the effect of weathering upon the rock, which was a kind of trap conglomerate or volcanic breccia.

Having reached the Kara Sú we ascended its narrow valley for three miles, crossing and recrossing the river several times, until we reached the village of Kara Oran or Kara Osman, the principal occupation of whose inhabitants was sawing timber brought from the fir forests of Soghanli Dagh. From hence to Bardes the country was said to be infested with Kurds, and at Khorasan we had heard long stories respecting the necessity of an escort, which, after some demur, we agreed to take. When, however, we started this morning, the boasted escort, which was to have consisted of eight armed men on horseback, had dwindled down to one man, provided with a teskereh from the governor of the district, to procure the necessary guards at Kara Oran. Here, however, we could only find one peasant on

horseback, armed with a yataghan, on which the man from Khorasan wished to leave us and return home; he accordingly asked for his bakshish, which we refused, compelling him to accompany us until we were in sight of Bardes.

Immediately above Kara Oran the river has forced itself through a trap dyke which extends some way east and west; beyond which we ascended the valley for nearly three miles, along a narrow road on the right bank, between projecting masses of trap conglomerate. The river then branches off into two streams, one descending from the N.E., the other from the N.W. After crossing the N.W. branch we ascended the rocky ridge between the two rivers, and at the first mile we passed the ruins of an old square building of large blocks of stone, built apparently in Cyclopian style, standing at the very edge of the precipice, and evidently intended as a place of security. As we advanced, the country changed to a bleak boggy upland, with many boulders of trap and trachyte scattered over its uneven surface.

Soon after one we saw on the opposite side of the valley to the east, and about two miles off, the ruins of a large castle or fort on a steep hill, said to belong to one Kara Oglan Bey. On the same hills patches of wood occasionally occurred, giving to the country the appearance of English park and forest scenery, whilst the hill on which we stood was bleak and barren in the extreme. We continued advancing to the north over this wild district for four or five miles until we reached the summit of the ridge or watershed, whence we descended by a steep path into the valley of Bardes, the town of that name being about two miles off to the north, in a well-cultivated and irrigated plain; a few trees grew on the hills around, chiefly firs, and another lofty range, capped with columnar basalt, appeared beyond Bardes to the north. We reached the small town about half-past three; in the middle of it is a low hill, crowned with the ruins of an old square tower or castle, which goes by the name of Sultan Suleiman Kaléh,

having been built by a Sultan of that name, and commands the pass and bridge across the river, which flows in a general direction from E.S.E. to W.N.W. We had here a specimen of the authority which chavasses exercise over the peasants, by seeing Muchtad laying his whip on an old Imaum, who, under pretence of procuring us a better lodging, enticed us out of the clean Oda, where we were comfortably established, into his own filthy stable. The town is said to contain 300 houses, all of which belong to Turks, whose principal occupation in this elevated district is the manufacture of wooden bee-hives out of the fir-trees from the forests of Soghanli Dagh.

This forest range is an important and interesting feature in the geography of this part of the country. It supplies both Erzeroum and Kars with fire-wood, although upwards of seventy miles distant from the former place, being the only district in which forests of any extent are to be found for many miles round; it is also famous as being the spot where Eyoub Pacha, the Turkish commander-in-chief, entrenched himself with the advanced army of 50,000 men, to oppose the progress of the Russians in 1828, while the reserved army of 150,000 irregular troops was collected at Erzeroum. But however impregnable Eyoub Pacha had made his camp, it did not cover the Bardes road, by which the Russians pushed on their advanced cavalry, who fell in with Caber Valesi Salik Pacha, the seraskier of Erzeroum, who had advanced to reconnoitre, with about 500 horsemen; these were completely routed, and flying with exaggerated reports of the Russian force to Eyoub Pacha's army on Soghanli Dagh, spread alarm on all sides. Each man thought of himself, and an universal and disgraceful flight was the immediate consequence; the panic-struck army disbanded, and the unfortunate pacha remained with only 200 men. He of course was made to suffer for the faults of others, was recalled by the Porte, and reduced to the post of Agha of the small town of Kirmasli, in Mysia,

where I had seen him a few months before. I was told, whilst still in the neighbourhood of Bardes, that the invading force of the Russians consisted of 22,000 infantry, 10,000 Cossacks, and 15,000 irregulars—Lesghis, Circassians, Persians, Turks, Georgians, Abassians, and Arnaouts, or Albanians.

Another remarkable fact connected with the forests of Soghanli Dagh is, that the Russians were supplied with timber from them for the erection of the fortress of Gumri; and such was then the paramount authority of Russia, that the Turkish peasants were compelled to cut the wood, gratis, for their professed enemies; and such was the grasping avarice of the pacha of Kars, that he received 70,000 ducats from Russia for selling it.

Friday, June 10.—Bardes to Kars twelve hours. Descending from the town by a steep road, winding round the ruins of the castle, we crossed the rapid stream flowing from S.E. to N.W., between lofty and precipitous rocks; and then ascended in a N.E. direction over trap and basaltic rocks, in which were traces of irregular columnar structure. We had started at six A.M., and in half an hour were winding along the side of the hills sloping to the Bardes Sú on our right, covered with basaltic boulders, which had, in a few places, been cleared for the sake of a scanty cultivation. Here we passed a large band of gipsies, clothed, like their namesakes all over the world, in rags and tatters. Although in their costume they bore a general resemblance to the Turks, and the women in particular wore large, loose trowsers, yet they were easily distinguished by their squalid appearance, as well as by the marked peculiarity of their countenances. They had a few cows with them, which carried their tents and tent-poles.

At seven we reached the village of Güshler, the inhabitants of which were all employed in sawing timber. This is said to be the yaila, or summer abode of the inhabitants of Bardes; but if so, habit rather than necessity must have

caused this change of residence, the difference between the climates of the two places being scarcely perceptible. On the other side of the valley a large stream fell into the Bardes Sú from the S.E., and the intervening country was tolerably well cultivated and irrigated; for at this elevation irrigation is always necessary to procure a crop of corn, in consequence of the length of the winters, and the heat of the short summers. At a quarter before eight we crossed the Bardes Sú again, and ascended a narrow lateral valley to the E.S.E., and soon entered some extensive pine-forests, a most agreeable relief after the almost total barrenness of the country through which we had lately travelled. The hills in front of us consisted of basalt and cellular lava: while on and near the road I perceived numerous masses of black and brown obsidian or volcanic glass, of which I have already mentioned the many small fragments found in the sands and gravels near Khorasan; but here it occurred in such quantities, and in blocks of such a size, that the road in some places was literally paved with it. After toiling up for about a mile we crossed a small stream, and ascended a beautiful valley, the rich green grass of which was enamelled with flowers, and adorned with numerous clumps of trees, grouped as it were with the greatest taste. On our right we passed close to a lofty hill, which appeared to be a mass of obsidian, so numerous were the fragments of that mineral which lay around its base.*

At a quarter before nine we reached a plain on the summit of the ridge, from which mountain chains branched off in every direction. Snow, too, was still lying in considerable patches around us. The view to the south and south-east was very extensive, over hills covered with firs, which formed part of the Soghanli Dagh. To the east was a long narrow ridge, thickly covered with wood, stretching into the

* I regretted not being able to devote some time to the ascent of this remarkable mountain. The great development of igneous rocks throughout the surrounding country proves that volcanic agency on a very large scale has been carried on in this neighbourhood.

plain. From this elevated summit we descended a steep ravine towards the north, and then turning east by north, continued for upwards of two miles down a narrow valley, the north side of which was, as usual, from its southern exposure, totally barren, while the south side was thickly wooded.

At ten we entered an extensive plain, which we traversed in an E.N.E. direction, along the foot of the low hills which form its northern boundary, for about twenty-four miles. It is watered by a river which enters it not very far from the valley which we had ourselves descended, and which is probably the principal source of the river of Kars. Our journey along this plain was uniform and uninteresting, with but few signs of cultivation or employment, except the timber waggons on their way to Kars. We passed through several wretched villages, and others totally ruined and abandoned, the inhabitants of which had either perished or been removed. In some parts large herds of cattle were grazing, and we occasionally saw a little cultivation on the low parts of the hills. As we advanced, we observed a distant range of snowy mountains stretching away to the S.S.E. in the direction of Mount Ararat. The hills on our left were generally covered with a short grass, which rendered it difficult even to guess at their geological formation; but one peculiarity which I observed in several of the lateral valleys and ravines was, that the escarpments of the hills were all towards the west, while they sloped away gently towards the east, showing that they dipped away from, and had been perhaps raised by the elevation of the mountain masses, which we had crossed yesterday and this morning.

Soon after four we passed a small village situated in a hollow on our left; close to the road, on a raised mound, was a circular stone building, with a conical roof, which had probably been the tomb of a Turkish santon. Low hills rose on our right, and soon after five we saw the river of Kars winding through the plain on the same side.

At half-past five we entered a narrow pass between high broken hills on our left and the Kars river on the right, beyond which was a ridge of hills, which, stretching away to the south, formed the eastern limit of the plain through which we had so long been travelling. Not a tree was anywhere to be seen, nor, as we advanced, did we see the slightest indication of our approaching the capital of this ancient kingdom, or, what is now more important, the frontier town of Turkey towards Russia. At length, after following the windings of the valley for nearly two miles, a sudden turn brought us in sight of the town, picturesquely situated in a rocky amphitheatre of black basaltic hills; its appearance was dark and dismal, partly from its total want of trees, and partly from the circumstance of all the houses being built of black basalt. As we advanced, the Armenian suburb stood before us, built on a low rising ground on the opposite or eastern side of the river, while the dark amphitheatre of hills extended to the left, covered with black huts or houses difficult to be distinguished from the rock on which they were built. In the centre rose a lofty hill with the ruined Turkish citadel on its summit, while the river was seen to escape through a narrow gorge behind the castle, which was thus almost completely insulated. After winding round half the suburbs and over ill-paved roads we crossed the river by a good bridge, and, passing through the Bazaars, entered the walled part of the city. Most of the houses were in ruins, the effect of Russian hostilities, but after winding some way through them we reached the house appointed for our konak by the Kaimakan or deputy of the Pacha. To our disappointment, the house belonged to a Turk; we always preferred a Greek or Armenian house, in which we were less exposed to the inconvenient and sometimes impertinent curiosity of the host. In this case, however, the ill-timed curiosity of our landlord, who at once began pulling about and scrutinizing the military buttons of my companion's coat, met with a suitable rebuff from the colonel, who had no idea at the time that

the man was not one of the servants of the house; he consequently marched off rather indignant, and we escaped his presence for the rest of the evening.

Saturday, June 11.—Halt at Kars. We proceeded this morning, accompanied by Giuseppe as interpreter, and attended by Muchtad and one of the Pacha's chavasses, to visit the governor. We found him an intelligent and civil Turk, but, as usual, surrounded by a band of dirty, ragged-looking attendants, dressed in every possible variety of garb. In the course of our conversation he made a sort of apology for the ruined state of the town, which had not yet recovered from the effects of the Russian war; nor did he express much friendly feeling towards them, although, as he observed, they were obliged to appear at least on friendly terms. He stated that the town contained 3000 houses; but this calculation is too great, although it may have been correct before its destruction by the Russians. There are twenty mosques and four baths. In the court-yard of the konak we saw for the first time some Kurdish horsemen with their long lances. About a foot below the iron point these lances have all a large tuft of black wool, nearly a foot in diameter, probably to prevent their penetrating too far and becoming useless; they have also another smaller tuft still lower down.

On an old wall near the Gümri gate I saw some fragments of Saracenic architecture, resembling those at Erzeroum, probably the remains of an Armenian church, which flourished during the existence of the kingdom of Kars. From the hills behind the castle on the left bank of the river we had a fine view of the town, which is commanded by these heights, on which the Russians erected a small battery, although their principal attack was from the plain to the east. The place surrendered after a siege of seven days, whereas it ought to have been carried in as many hours; the garrison was extremely weak, consisting only of 1000 irregular troops and 1000 armed peasants, totally useless in a besieged fortress. There were said to be also 300 pieces

of cannon; but without men to serve them, these were useless, and were all taken away by the Russians. The Bazaar is small and ill supplied.

On our return home we had a visit from our host, who had recovered his good humour, and was civil and respectful. He belonged to a rich family, and had been one of the principal proprietors in the neighbourhood, but was nearly ruined by the Russians. Having made inquiries respecting the ruins of Anni, the governor promised to send a chavasse with us, to insure our being well treated and supplied in the surrounding villages; and a Greek agent of the consul also volunteered his company. We determined to extend our excursion as near as possible to Gümri, the Russian frontier town on the high road to Erivan, which we had heard the Russians were fortifying to a great extent, and for which they were buying up large quantities of timber from the Turks. What a striking contrast this exhibits between the conduct of these two people,—the Russians strong and flourishing, and constantly acting as the aggressors, fortify their frontier line on the left bank of the Arpa Chai, thereby securing every successive conquest; while the Turks, weak and disorganized, helpless against their neighbour, and oppressed by their own rulers, leave the line of their frontier without a guard or a sentry, and their towns dismantled, in ruins, and unprotected by a single soldier or piece of cannon!

Sunday, June 12.—Kars to Hadji Veli Kieui five hours. We left Kars by the eastern gate, near to which, on the city-walls, we observed some rude bas-reliefs representing animals, in a style which may be called Armenian. On reaching the plain, we fell in with upwards of thirty timber waggons on their way to Gümri. Our direction lay nearly east, while that of Gümri was east by north; as we advanced, the hills to the north gradually trending away, we soon found ourselves traversing a flat, undulating plain of basalt, rising gently towards the east. In front of us, about seven miles from Kars, two conical hills, evidently extinct volcanoes,

rose from the plain, showing that the volcanic nature of the country still continued towards Mount Ararat. These basaltic rocks were extremely cellular and vesicular, from whence their more recent origin may be inferred. Not a tree appeared upon the plain, nor upon the high range of Karadagh, about eighteen or twenty miles off to the E.S.E.; the pasture, however, was excellent, and near Kars we saw much arable land; but the crops were still backward.

At one P.M. we passed between the two conical hills, the protrusion of which has caused a low ridge of hills, as the ground almost immediately afterwards slopes towards the N.E. Before reaching Hadji Veli Kieui, we passed more waggons laden with timber, and driven by Georgian and Circassian peasants, whose fur caps and tight dresses easily distinguished them from the Turks.

Hadji Veli Kieui is a miserable small place where the Kaimakan of Kars had ordered us a konak; but it was no better than our usual lodgings; worse, indeed, in some respects, as our horses were under the same roof, and only separated from us by a low railing. At a distance, indeed, a stranger would have had some difficulty in recognising it as a village, for the houses were all under ground, appearing like low heaps of rubbish, with a few walls or mounds of stones on them. It is situated on the western bank of a deep and narrow ravine in the basaltic rock, on the brink of which were the remains of a small rude castle, now used as a cattle fold. The basalt has in some places a slightly-columnar structure; the upper part is extremely cellular, but becomes more compact lower down. Walking over the hills to the east, which are covered with fine pasture, we observed the loose stones collected into heaps in many places, as well as the marks of half-obliterated furrows, symptoms of a more extensive cultivation in former times. In the course of our walk we first saw the lofty peak of Ararat, or Aghri Dagh, towering in majestic and solitary grandeur above all the surrounding hills, from which it is completely detached, with its summit for several thousand

feet covered with perpetual snow, and rising to a high point from a broad and sloping base. Beyond the Russian frontier we also saw the lofty snowy mountain of Alaijah Dagh bearing E. by S., and numerous other volcanic-looking conical hills to the S. and S.W., besides others at a greater distance to the E. and N.E. In the evening our host, according to the usual Turkish practice, on our showing him a little civility, and pointing out the peculiarities of our copper-cap pistols, began to be over-familiar and presuming, and confirmed me in my opinion that the only way to get on with these semi-barbarians is by treating them with ordinary civility, and keeping them at a distance.

Monday, June 13.—What between my anxiety to see the ruins of Anni and the annoyance of vermin, I was unable to close my eyes all night. We started at five A.M., the country being rather hilly, but otherwise resembling that through which we had passed since we left Kars. As we were doubting whether we should find anything to repay our exertions, the ruins suddenly came in sight, and at seven we reached a village seven miles from Hadji Veli Kieui, having crossed two or three small streams flowing N.E. towards the Kara Sú and Arpa Chai, the ancient Harpasus. The modern village is about half a mile to the north of the ruins; to which we proceeded, after having established ourselves in a small Oda.

The town of Anni* was built in a triangular form, on a rocky peninsula overhanging the rapid waters of the Arpa Chai; it was defended on the east by steep cliffs, at the foot of which the river flows in a deep and winding gorge, and on the west by a dry ravine of considerable breadth, in the steep sides of which many thousand tombs and caverns have been excavated. These two valleys meet at the apex of the triangle towards the south, while the base towards the north, where the promontory joins the flat table-land of the country, is fortified by strong and massive walls, defended by numerous round towers, ex-

* See the "Travels of Sir R. K. Porter," vol. i.

tending completely across the isthmus. These walls are still in some places forty or fifty feet high, and very beautifully built, the outer casing consisting of large square blocks of yellow stone from the neighbourhood, closely fitted together. A singular and striking effect has been produced by the occasional introduction of alternate courses, as well as crosses and other ornaments, in black stone, also from the neighbourhood.

In this wall we observed two gateways leading into the town, the most western of which was flanked by towers of great height, but it was so blocked up by fallen fragments that it was impossible to enter. The other entrance was near the centre of the line, where was a double wall, and the two gateways were not upon the same axis. Immediately opposite the entrance in the outer wall, some Armenian inscriptions and a lion have been rudely carved upon the inner one, the entrance of which was also flanked by round towers. On passing the inner gateway we had a full view of the town, with the walls stretching away from us on each side; and although these ruins were not so numerous as we had expected to find them, there was, nevertheless, something impressive and almost awful in the sight of a Christian town, built in a style so peculiar to itself, and unknown to modern Europe, now nearly in the same state in which its destroyers had left it eight centuries ago. The whole site of the town was covered with the fallen remains of smaller buildings and private dwellings, whilst about twenty large public edifices could be distinguished from the rest. These were chiefly churches and chapels, with two beautiful octagon minarets, one of which was still attached to a ruined mosque; considerable remains of the palace were also visible.

The principal object, which attracted our attention on entering the town, was the large Christian church to the south of the gateway, built in the form of a Latin cross, and in a good state of preservation. The pointed roof was formed of large slabs of stone supported on arches, and,

with the exception of the cupola, was perfect. The entrance was at the west end, and on each side of it were numerous inscriptions in the Armenian character, which, when deciphered, will throw light on the history of the place. Indeed, there is hardly a building in Anni of any consequence which is not covered with Armenian inscriptions. The interior of the church consisted of one central and two side aisles; its length from the semicircular bema to the entrance was 107 feet, and the width 66 feet. The style might be called Byzantine, with a mixture of Saracenic; the round arches are raised upon lofty pilasters, which give them a very different character from the real Byzantine or low Saxon arch. This style we found prevailing universally in Anni, but in some instances with a greater variety of ornament and sculpture, and gradually approaching the rich Arabic or Moorish style. On each side of the bema, in which were twelve niches, was a small dark apartment or vestry, with a narrow staircase leading up to two similar rooms above. The church was full of cattle, which had taken refuge there from the mid-day heat.

A short distance to the west of the church was a high minaret with a long Arabic inscription, and 100 yards further south the remains of a large mosque, with its minaret still standing. It was built on the edge of the precipice overhanging the Arpa Chai, and was decidedly Saracenic; the roof was supported by low columns with flat capitals. The building was nearly square, one corner only being filled up in order to support the minaret; and on the outside were inscriptions both in Arabic and Armenian. At the south end of the town, near the apex of the triangle, was an elevated rocky spot, which in a Greek city would have been the Acropolis; here, however, we only found the ruins of three or four small chapels on the summit and sides of the hill, without any vestiges of its ever having been fortified. On its S.E. side was another chapel in rich style and good preservation, with a conical roof, a form which prevailed in all the buildings where

the roof still existed. A slight wall extended round the hill at a little distance from the summit, but it was probably only intended to mark the limits of the town, as the steep nature of the ground rendered any other defence superfluous. Between this hill and the large church described above we found the remains of another church completely destroyed and levelled to the ground, but with many fine fragments of architecture lying amongst the ruins. From the general appearance of the fallen masses, which are less broken and less defaced by soil and rubbish than the others, it would seem to have been only lately thrown down.

Returning from the Acropolis along the western side of the town we examined several other interesting buildings, striking from their rich style, and well deserving the attention of the architectural antiquary. The first was an octagon chapel, thirty feet in diameter, surmounted by a dome, and having seven circular niches inside, the eighth being supplied by the entrance; these niches are in shape rather more than a semicircle, thus giving the interior a peculiar and indented character. Within the architecture was extremely plain, but on the outside highly ornamental; rich traceries, flutings, and fretwork, with deeply-carved twisted beadings, were carried round the windows and under the cornices. Here also the roof was conical, and formed of large flat slabs, with their edges lapping over each other.

Another richly decorated church was situated to the N.E. of that last described, having attached to it a chapel with a beautiful arched roof, divided into several compartments, filled with mosaics of various patterns, formed of the different coloured stones of the neighbourhood, and having its walls covered with rich carvings and sculptured arabesques. The arches supporting the roof are circular, but pointed arches are produced by their intersections, and various other ornaments commonly called Gothic are occasionally introduced; and I could not avoid indulging in the conjecture that the origin of those rich styles called Gothic and

Saracenic might be satisfactorily traced by studying the ornaments of the capitals, and of the numerous angles or recesses between the arches, in which a regular gradation may be observed from perfect simplicity to florid exuberance.

Near the west end of the walls, but within the town, we visited the remains of an extensive building, situated on the edge of the ravine; it had consisted of several stories, in each of which many apartments still remained. It has evidently been the palace of the Kings of Anni, at the period of their greatest power; the masonry is excellent, the blocks of stone fitting with the greatest precision, as is the case with most of the buildings which are still standing, and which had been cased with large square blocks, the edges of which are as perfect as when first built. The gateway is in rich Saracenic style, the window over it has a pointed ogive arch, and the wall is adorned with rich mosaic patterns in various coloured stones.

Many of the caverns in the ravines round the town were sculptured on the inside, showing architectural designs, or covered with rude, ill-carved figures. In one of those near the palace, the sides were cut so as to represent columns, capitals, and cornices, and the roof resembled arches and beams thrown across from the columns on each side. Below the principal church on the east side of the town we found the ruins of a high narrow bridge thrown across the Arpa Chai, leading into the province of Georgia. It is now impassable, the buttresses only remaining on each side; all communication with the Russian territories is thus cut off.

The history of this ancient city is very imperfectly known; but, situated on the frontiers of Armenia and Georgia, it became, in the fifth or sixth century, the capital of the Pakradian branch of Armenian kings.* In A.D. 637 the Arabian Caliphs first invaded Armenia, and in 887 they conferred a tributary crown on the Pakradian family, who were then highly distinguished by the Mahommedan

* St. Martin Histoire d'Armenie. Smith and Dwight's Researches in Armenia.

Governor of Armenia, and in 961 a branch of the Pakradian Kings established the kingdom of Kars. Shortly afterwards the Turkish hordes, bursting forth from central Asia, invaded Armenia and devastated the country. In 1046 a King of Anni had bequeathed his capital and kingdom to the Greek Emperor, and his family was transferred from the throne of Armenia to the proprietorship of a few towns in Cappadocia.

The invasion of the Tartar or Turcoman tribes became every year more destructive. In 1049 they sacked Ardzea, a city near the modern Erzeroum, and levelled its 800 churches to the ground. Fourteen years after their leader, Toghrul Bey, died, but was immediately succeeded by his nephew, Alp Arslan, who took and pillaged Anni with dreadful slaughter in 1063. He subsequently made over the city to a Kurdish family, which after a desperate struggle was dispossessed by the kings of Georgia; since which period Anni has been neglected and abandoned by civilized inhabitants, left as a hiding-place for wild beasts and robbers, and the resort of wandering tribes, who combine the ferocity of the former with the deceit and craftiness of the latter.

CHAPTER XIII.

Leave Anni—Armenian Villages—Gümri—Return to Kars—Mount Ararat—Kars to Bardes—Wild Mountain Scenery to Id—Liesgaff—Mountain Passes—Vale of Tortoum—Beautiful Scenery—Khizrâh—Yaila of Euduk—Descent to Ispir.

TUESDAY, June 14.—We would willingly have remained at Anni another day to examine its ruins with more detail, and to copy some of the Armenian inscriptions; but we had been warned against robbers from Karadagh if we spent the night here; and having already so far disregarded the advice which had been given us, we thought it prudent to be off early this morning. We accordingly started soon after six, passing over an elevated table-land, consisting chiefly of volcanic scoriæ and lapilli, about 200 feet above the bed of the river, passing close to the village of Aras Oglu, three miles north of Anni. From thence our road led us over similar ground in a N.E. direction to the village of Maurek; here also we observed the ruins of an old church in the same style as those of Anni, but with only one pier standing, and half of the arch springing from it; about a mile to the W.N.W. was also a chapel of the same age, with a conical roof. Near Maurek we rejoined the high road from Kars to Gümri, when our direction changed to E.N.E., and we had several fine views of Mount Ararat in different positions on our right, with the mountains of Georgia in front.

A little way beyond Maurek I found a thin bed of pale yellow sand, filled with numerous shells, resembling those near Khorasan, overlying a bed of concretionary calcareous marl. These beds all dip a little to the N.W., under the black peperite, with which the neighbouring hills are capped, and contain no traces of volcanic matter. I shall not here enter into any discussion of the manner in which these geological events took place, or attempt to explain the

theory of their formation ; but I cannot help observing that the whole geology of this district of Armenia, connected with the immediate vicinity of Mount Ararat, seemed to me to coincide in a remarkable manner with the account of the Sacred Historian, from which it derives a charm and interest which is most satisfactory to the lovers of geological investigations.*

At half-past nine, three miles from Maurek, we reached the banks of the Kars river flowing from the N.W., and had some difficulty in fording it, as two of the baggage horses were taken off their legs, and carried a short way down the stream. We then ascended the table-land between the river of Kars and the Arpa Chai, into which the former falls a mile or two below the ford, and soon saw the latter flowing through a wide valley on our right, beyond which the continuation of the plateau could be traced for a considerable distance, resting against higher hills. After descending into the plain of the Arpa Chai we advanced along the Turkish frontier for two miles, until we reached the village of Ghuraigel. Here we observed, as in most of the villages along this frontier, a large ruined oblong building of stone, and of peculiar construction. It resembled something between a church and a castle, and perhaps had served for both purposes; in one or two villages on the Russian side we also observed similar buildings, some of them quite insulated.

Soon after twelve we reached the heights opposite the Russian quarantine ford of Gümri, whence, by the help of our glasses, we distinctly saw the works which the Russians were erecting on the heights of Gümri, though for what purpose it would be difficult to say, as they cannot dread an invasion on the part of Turkey. The Arpa Chai here flows through rich and extensive meadows, on each side of which, at a distance of rather less than a mile from the river, the hills rise abruptly, forming the table-land before mentioned, capped on both sides by a black volcanic

* See Appendix. Note C.

peperite, and constituting a strong line of defence on either bank. The Russians were not fortifying the town itself for the present, but they were erecting redoubts to a great distance, on the heights to the N.W., with bomb-proof buildings, barracks, and field-works: our observations were, however, imperfect, as we could not approach within two miles of the spot where their operations were carried on.

This table-land extends, geologically speaking, the whole way from Anni, except where occasionally cut through by rivers and valleys; it may also be traced on the Russian side to the foot of the mountains, a distance of nearly ten miles, where, to the N.E., we observed several villages or towns. The appearance of the peasants and villagers, whom we saw to-day, resembled that of the Georgians and Circassians, with their fur caps and tight dresses; the women, too, did not hide themselves at our approach; but the villages had an air of extreme misery and wretchedness, the inhabitants being more raggedly clothed than is usual amongst the Turks.

Leaving these heights we commenced our return to Kars, over the same undulating country for seven or eight miles, until we reached the village of Uzun Kiliséh, where we halted for the night. This place also contains one of the fortified churches above mentioned, which was said to be Armenian. It was oblong, and without windows, having a doorway three feet high, built of large blocks of stone; but the roof had long since fallen in. The village was inhabited by Persians from Erivan, many thousands of whom came over when that city was taken by the Russians. According to the treaties concluded between Turkey and Russia, they were afterwards sent back, with the exception of a few hundreds, who still dwell in the villages in this neighbourhood.

Wednesday, June 15.—Uzun Kiliséh to Kars eight hours. We started soon after seven, and, after crossing a small stream flowing S.E., again came upon the shelly formation before described, and passed many more waggons conveying

wood to Gümri. Between forty and fifty arrabáh loads are said to pass every day, each load, consisting of one tree, being sold for fifty piastres or ten shillings. The peasants stated that it was expected that the whole would be completed in about seven years. At nine A.M. we forded the Kars river, very wide and deep, near a place called Yamuschli, three hours above the spot where we passed it yesterday. Half a mile below the ford was a narrow gorge in the hills on our left, through which the river flowed between perpendicular cliffs at least 200 feet high. For the next six miles we traversed an open uncultivated plain, until we reached a low range of hills capped with basalt, and apparently the north-western prolongation of those between Kars and Hadji Veli Kieui. Here we passed several waggons laden with cotton coming from Erivan by way of Gümri; and as we approached Kars, we saw a few instances of cultivation. The soil is light and rich, and much might be done to make it productive, were it not for that perpetual obstacle to all improvement in this country, a scarcity of water. We reached the town a little before four, having met close to the gates a party of Russian deserters whom the Turkish authorities were re-conducting to the frontier; a practical proof of the influence and power which the Russians exercise over their neighbours.

Thursday, June 16.—Halt at Kars. The elevation of this country is very great, which sufficiently accounts for the lateness of the crops, and the severity of the winters. I had no barometer with me, but the thermometer showed the boiling-point of water to be 200° of Fahr., which would give an elevation of between 6000 and 7000 feet above the sea. The neighbourhood of Kars is surrounded by lofty mountains, and is much exposed to thunder-storms. Ever since we entered this district we have heard thunder every afternoon, and on most days we have been overtaken by heavy thunder-storms about three P.M.

Friday, June 17.—On leaving Kars I separated from my

companion, and returned to Trebizond alone. I had the choice of two routes: either to proceed to Batoum by a picturesque but difficult road near the Russian frontier, and from thence along the Black Sea to Trebizond; or to return to Bardes, across the mountains to Ispir, and from thence to the Black Sea at Rizeh. I determined upon the latter, as being a new line, and started early this morning for Bardes. Soon after leaving the walls of Kars, I fell in with a party of women celebrating a marriage-feast by strolling into the country and rambling over the hills. They were all dressed in the universally-worn feriji, but there was a great difference between those of the rich and the poor. Those worn by the slaves and women of an inferior class were always of blue check, whilst those of the better class were of white cotton with a broad red border, or a mixture of silk and cotton, from the manufactories of Brusa. Some of the dresses of red and gold brocade under the ferijis were very handsome.

On reaching the summit of the mountain chain, where the descent into the valley of Bardes began, I was much struck with the grand view of mountain scenery to the N.W., consisting of many successive lofty ranges of various shapes and hues, giving a foretaste of the grand views and difficult roads which I should meet with on my way to Ispir. This valley would well repay a long geological examination. A mountain summit on the right of the road, two miles north of Bardes, is capped by a magnificent range of basaltic columns, below which is seen a stream of lava or basalt close to the road-side, overlying the almost perpendicular beds of various-coloured marls. The hill on our left, as we descended into the town, consisted of irregularly columnar basalt; and the different terraces, which I had before observed, are owing to the lava streams having cooled in different beds or sets of columns, and the upper ones having been more abraded than those below. Having taken up my quarters in my old konak, I learnt that the distance to Ispir was much greater than I had expected,

which deterred me from halting here, as I had intended, to geologize amongst the surrounding hills.

Saturday, June 18.—Bardes to Id, ten hours. I started soon after six, passing close to the small fragment of a doorway, presenting to view a pointed arch of rich Saracenic architecture. Descending from the town, the road led along the banks of the Bardes Sú, already a considerable stream; the valley was shut in by high and rugged rocks, but we saw more trees and shrubs than usual, and the ground was cultivated on each side of the river, wherever it was sufficiently level. The stratified rocks to the right were almost perpendicular, dipping N. by W. 70°. Two miles and a half below Bardes the river made a sudden bend to the N.W., about a mile beyond which I observed on the right hand the junction between the igneous rocks and the calcareous marls, between which was a vast development of altered rock of a green colour, and highly polished on its broken fissures. Like the igneous rocks a little way lower down the ravine, it decomposed very readily, forming beds of kaolin, which obscured the point of junction; the effects of weathering are consequently very visible in the lateral valleys, where the rocks have been worn into many pointed hills and conical mounds of various colours.

In this valley the wild barberry grew luxuriantly, besides two species of willows and many flowers, which gave it the appearance of a beautiful garden. The road in many places was extremely dangerous, along the sloping banks between the river and the rocks, but the grand sublimity of the scenery makes the traveller heedless of such trifles. At half-past eight we again crossed the river by a bridge, consisting of two or three planks laid lengthwise over the torrent, without even an attempt at a parapet, and from which our horses had to scramble down as they best could. A little way lower down we passed some water meadows and irrigated corn lands; the crops here are consequently much more advanced than near Kars. The river then winds through a narrow and rocky defile between steep

shelving rocks on either side, over which even a horse-path has been made with great difficulty.

Soon after nine the valley again widened, our course being N. by E.; after which we quitted the river and ascended a small lateral valley to the left, in which the water was of a muddy, greenish white colour, leaving everywhere a considerable sediment, owing to its flowing over a decomposing igneous rock. Our road led up this valley for nearly three miles along a narrow and dangerous ledge, winding round projecting masses of rock on one side, with a deep precipice and the stream immediately below us on the other.

At 10h. we crossed the greenish white stream flowing down from the hills on our right, above which the principal stream was perfectly clear. The rocks here were entirely igneous; one of them, a curious crystalline rock of a green colour, contained large imbedded crystals of actinolite or hornblende. Presently the valley separated into two branches, opening to the N.W. and to the S.W.; we ascended that to the S.W., passing through the village of Tebrenek, situated near the top of the granitic ridge which separates the two valleys; and continued for nearly three miles, ascending the narrow ravine amidst a succession of wild and beautiful scenery, a mixture of wood and rock. The whole of this valley offered some of the grandest specimens of mountain scenery I had ever witnessed, and continually varying in character, now passing through narrow gorges, where a road overhanging the torrent has with difficulty been scooped out, then through green valleys expanding into open meadows, and again threading its way through thick and flourishing fir-woods. Sometimes a rocky staircase led to the point of a projecting craig, when a sudden turn has shown a winding path vertically below us, more suited for a mountain goat than a laden baggage-horse.

At noon I halted to obtain a meridian observation of the sun, but the thickening clouds rendered it impossible.

We stopped for a short time in a beautiful green valley a quarter of a mile wide, bounded by steep hills on either side, covered with luxuriant woods, and enamelled with many beautiful flowers.

Leaving this valley, we ascended the hills to the west through noble park-like scenery, interspersed with clumps of firs and junipers, and presently entered a thick and extensive fir forest, which covered the tops of the hills; here I was struck with the number and variety of gay and unknown flowers, besides the common strawberry, raspberry, and other species of Ribes. At a quarter before one we reached the summit of the *col* or ridge, whence I had a most extensive view, overlooking a broad expanse of peaked and rugged mountains, partly wooded and partly almost bare. Far away to the N.W. was a chain of snow-clad mountains, whilst in another direction a violent thunderstorm added beauty and variety to the tints by the different shades which it produced. Such a prospect on a lovely day, and with a soft and gentle breeze impregnated with the aromatic odour of the firs and pines, left nothing to be desired.

From this ridge we descended by a steep road over igneous rocks for about two miles W. by N. into a small valley, watered by a stream flowing S.W. between hills of blue, red, and purple marls and sands, dipping W. and S.W. from the trap-rocks. Soon after two, we passed through a narrow gap in a natural dyke or wall of rock running across the valley, and consisting of coarse conglomerate, containing numerous rounded pebbles and boulders of trap, porphyry, &c., forming a mass of porphyritic conglomerate, which, having probably been poured forth during some volcanic paroxysm, has filled up a fissure in the pre-existing rocks. Having passed these narrow *fauces*, we again emerged into an open plain, where, resting conformably upon the last-mentioned formation, I saw beds of marl of great thickness and of a thousand different colours, abraded by time, weather, and water into conical

hills, which gave a strange appearance to the scene. Some of them rise singly, like gigantic ant-hills from the plain; others were arranged in far extending lines, and others were still connected with the general mass of the surrounding hills.

After crossing a low ridge of sand-hills, we entered the plain of Narman, which appeared about a mile and a half off to the S.W. The contrast of this green and tranquil plain covered with rich crops of corn, without a tree to break its uniformity, and shut in by lofty mountains, with the wild scenery through which we had passed in the morning, was very striking. About half a mile on our right a rapid river was flowing at the foot of the steep hills, until it escaped through a narrow gorge to the N.N.W. This river, which, from flowing through Narman, was here called the Narman Sú, was said to fall into the Arpa Chai, but it appears to me far more probable that it joins the Tchoruk Sú. A few trees at the extremity of the plain mark the site of the village, where the river and the road pass through a narrow gorge in the hills. The greater part of the village, which consists of dirty, but picturesque-looking log huts, is situated in the pass itself, which was formerly defended by an old ruined castle on the left bank.

Immediately above the pass a road to the west led to the large town of Olti, said to be two hours off, while that which we followed continued along the banks of the river in a S.S.W. direction, the hills gradually receding, and diminishing in height as we advanced: a mile and a half above Narman the river again flowed along a narrow pass, where we were obliged to wade through the water; but the peasants were constructing a new bridge, apparently on sound principles. When we again emerged into the plain, I had an opportunity of examining the variegated and almost vertical rocks, and found that they consisted of volcanic sand, mud, and ashes, containing large boulders of trap, porphyry, and other igneous rocks. Some of the

beds were penetrated by veins of a white spar, either gypsum or carbonate of lime, running parallel to the strike and dip. Resting against the edges of these formations was an extensive lacustrine deposit, consisting of thick beds of sand and gravel, also containing boulders of trap, porphyry, and amygdaloid, which had been worn away by the river to a considerable depth.

The plain above Narman for six or seven miles S.S.W. bore evident marks of having once formed a succession of lakes three in number, filled with a horizontal lacustrine formation of great thickness; for, looking at the rocks which form the narrow passes above mentioned, it is clear that they were once closed up, and have been broken through by the weight and action of water. In the case of the upper basins, this opinion was fully confirmed, by the extensive level table-lands extending into the plain from the mountain sides at a much higher level than the present bed of the river, and by the existence in many places and for miles together of horizontal parallel roads, distinctly marking the height at which the waters once stood.

At half-past five we left the plain, and, after proceeding S.W. for two miles, entered a lateral valley, along which our course was again west, and I began to have hopes of at length reaching Ispir, which, from the tortuous nature of the road, seemed at times to be very doubtful. At a quarter after six we arrived at the dirty village of Id, looking south over an extensive and well-cultivated plain. The irrigation was here universally extended to the corn-lands, the spring being so backward, that the hot summer would otherwise have dried up the plants before they had time to ripen.

Sunday, June 19. Id to Liesgaff, five hours.—The rocks behind the village consisted principally of thin contorted strata of white gypsum, decomposing to a pale greyish yellow, with an almost vertical stratification; and were, perhaps, a continuation of the volcanic tuff passed yesterday, in

which the veins of gypsum predominated. Id contains 100 houses, and a neat mosque. A Russian force of 200 men took possession of this place during the last campaign, having marched across the mountains from Karakli, after the taking of Erzeroum; from hence they proceeded to Bardes, but the road scarcely seems practicable for artillery.

Leaving Id, I proceeded nearly due west for three miles; passing a valley to the right which showed a great variety of nearly vertical beds, apparently volcanic ashes or mud, the general strike of which was from N.E. to S.W. Soon after which we entered a narrow rocky gorge, which cuts through almost perpendicular beds of syenite; the road, if road it could be called, whether along the bed of the stream or winding its trackless path over the sloping banks, was bad and difficult. Emerging from this pass about eleven, we had on our right the site of a village which had been destroyed by the Russians, who were encamped here for some time; we soon quitted the road to Erzeroum, along the bottom of the valley W.S.W., and ascended the hills on our right, where I halted for the purpose of getting a meridian observation of the sun's altitude, which gave me the latitude of 40° 18'.

On again starting, our course was due west, the ground sloping rapidly towards the valley on our left, as we obliquely ascended the mountains, and crossed the strike of several vertical beds extending from N.E. to S.W. Soon after one we reached the summit of the ridge, which, like most others in this part of the country, extended from N.E. to S.W. From thence we descended rapidly into a deep valley on our right, along which ran the high road from Olti to Erzeroum, opening into the valley of Liesgaff. Here we reached the upper village of that name (Yokhara Liesgaff), and after descending the valley for about two miles in a S.W. direction, we came to a lower village (Aschaha Liesgaff), which is situated at a short distance from the high road, in a valley surrounded by steep yellow rocks, in which

the rays of an afternoon sun, concentrated as in a focus, were most oppressing. Here we were obliged to content ourselves with a night's lodging in a miserable stable.

Monday, June 20.—Liesgaff itself is a bleak and dreary spot, belonging to the district of Tortoum which supplies Erzeroum with fruit and vegetables, and contains about forty houses. We left it at five A.M., and proceeded for three miles due west down an open and partially-cultivated valley along the road from Olti to Erzeroum. At six we passed to our left a rocky pinnacle, crowned with the ruins of an ancient fort, similar to one which frowns over Liesgaff from the summit of a lofty rock. Presently our course changed to north, leaving the road to Erzeroum, and following that which leads from thence to Tortoum. Masses of trap rock and dykes protruded in several places through the contorted strata of limestone and sandstone; and as we descended rapidly, I remarked a great improvement in the vegetable productions. The banks of the river were covered with flowers and creepers of various kinds, amongst which were the tamarisk, wild roses, and others, which announced our approach to a more genial clime.

I had been led to expect a wild and difficult pass to-day through the mountain glens, but I was not prepared for the tremendous though beautiful scenery which awaited me after proceeding about two miles in this northern direction. After receiving the waters of two or three tributary streams, the valley suddenly contracted, and the raging torrent, hemmed in between perpendicular cliffs nearly a thousand feet in height, urged its way through a deep and gloomy glen, in many places without leaving the smallest space of ground on either side, whereon to make a road. Sometimes a slippery and dangerous path had been cut along the talus of debris which had fallen from the lofty cliffs; but this, as well as the talus itself, had in many places been washed away by the violence of the torrent; and for a mile and a half we were contantly obliged to

descend into the bed of the stream, and pick our way as well as we could, amidst the huge stones with which it was encumbered. The rocks on either side consist of vertical and contorted strata of thin-bedded limestone, sandstone, and calcareous shale, which are traversed almost at right angles by this gigantic fissure: the strike of the beds is from E.N.E. to W.S.W.; the characters of the formation are precisely the same as those seen in passing a similar mountain gorge between Baibourt and Erzeroum; and, on examining the map, it appears that they are exactly on the same axis, the one being a direct prolongation of the other, in the line of strike.

Emerging from this stupendous pass, we crossed a muddy stream flowing from the east, with which the principal river for some distance refuses to mingle its pure and limpid waters. Leaving the bed of the river, we encountered a mass of dark volcanic rock, which for nearly two miles further formed a succession of narrow passes, through which the river had forced a deep and tortuous passage far below the road, along which we were leading our fatigued and frightened horses. The heat was becoming very oppressive, and we hailed with delight the sight of a party of peasants conveying a string of asses and mules, laden with cherries, from Tortoum to Erzeroum; but they refused to halt or to part with their fruit, though we offered them ten times its value.

The same grand scenery continued for some distance, the trap rocks on either side rising to an immense height, and the river flowing through deep and narrow gorges below. At length we descended to the water's edge, and continued along a narrow path cut round the projecting rocks which rose perpendicularly above us on the one side, while the river was boiling and foaming immediately below us on the other. At half-past eight the valley widened, and cultivation improved rapidly as we approached the beautiful fruit-orchards of Tortoum. It was impossible to imagine a more delicious scene, or a more complete change from the

wild and savage glens through which we had been so lately travelling than was now presented to our view. A broad and excellent road led along the banks of the river, now flowing peacefully and calmly through the fertile vale, while lofty trees, which completely overshadowed the road, protected us from the sun. Rich gardens, crowded with fruit-trees laden with their golden produce, stretched along the rising ground to the foot of the limestone cliffs, which bounded the valley on either side, and down whose steep and craggy sides numerous cascades danced and tumbled in their haste to join the river, spreading plenty and fertility in their course.

We had scarcely entered this delightful district,—a perfect Oasis in a desert, and which might well become the subject of the poet's song,—before we left the principal valley, and ascended a lateral valley to the west. The change was inauspicious, and I foresaw at once, from the nature of the country, that we should have to cross a severe mountain pass. For some distance, however, the same beautiful and luxuriant scenery continued, as we threaded our way through well-shaded gardens and orchards, protected by hedges of wild cherries, barberries, and roses, and by the side of a mountain stream, whose clear and transparent waters hurried from rock to rock in their downward course. Amongst the fruit-trees, apricots, cherries, mulberries, and walnut-trees were the most conspicuous. By degrees the valley became narrower, but the bottom was still occupied by orchards and gardens, protected by vigorously growing walnut-trees. This luxuriant vegetation appeared chiefly owing to an extensive system of irrigation, rendered easy by the rapid fall of the river. Being without my barometer, I had no means of ascertaining the height of this valley above the sea, nor could I learn whether the waters fell into the Euxine or the Caspian; I think, however, into the former. Near the road-side we passed two singular dome-shaped hills, formed by calcareous springs issuing from the limestone rocks.

Soon after ten we left the bottom of the valley, and ascended the hills on the right, the river still flowing amidst luxuriant woods: the fruit-trees disappeared as we advanced, and, ere we reached the small village of Khizráh, had almost entirely ceased. Here I was civilly received by the young Agha, who, after smoking a pipe, recommended me to proceed two hours further on, to a mountain yaïla on the road to Ispir, where I should be well lodged and find plenty of horses. Not knowing the Turkish character so well then as I did afterwards, and their constant endeavours to escape from the duties of hospitality, I foolishly trusted him, and quitted with regret the delightful vale of Tortoum.

Leaving Khizráh at half-past eleven, we continued in the same westerly direction for a mile, and then entered a narrow gorge through the limestone rocks to the N.W., ascending by a zigzag road for several miles, and passing a deserted village, until, at half-past one, we reached the summit of a bleak and dreary upland waste, capped in many places with a stratum of irregularly-columnar basalt, and in another hour, after much toil and labour and cold, reached the miserable yaïla of Euduk, which we found filthy, wet, and muddy. We had great difficulty in getting any accommodation at all, having been offered first an open shed, and then a dirty cow-house. Muchtad was obliged to have recourse to his whip before he could reduce the villagers into anything like civility. The climate, too, in such close proximity to the clouds and snow, was wretchedly cold; and in the evening, with the help of all the firing we could obtain, the thermometer did not rise above 49° Fahrenheit. The knavish Agha of Khizráh had grudged me the hospitality of his own village, and threw the burthen of entertaining me on those who could least afford it. The rocks in the neighbourhood were all trachytic, and appeared to have issued from a mass of hills a few miles off to the S.W.

Tuesday, June 21.—Leaving Euduk at half-past six we ascended to the summit of the ridge, and thence descended, at first over marshy bogs, and then rapidly down a steep and rocky path, into another valley, the stream of which was flowing east into the river of Tortoum. Our direction was chiefly N.N.W., and the descent, through woods of birch and fir and other beautiful shrubs and plants, was very picturesque: amongst them were the juniper, barberry, and Judas trees; some of the latter on the banks of the river being fine timber-trees, thirty or forty feet high. Having crossed the boiling torrent by a very unsound bridge, we ascended to the little village of Yeni Kieui. Here I found the lilac in flower for the first time, and, looking back towards the S.W., saw a fine cascade rushing over the mountain side, and falling into the river a little way above the bridge.

From Yeni Kieui we ascended to the summit of another steep and narrow ridge, extending E. and W., and connected at its western extremity with the general mass of rock, consisting of a reddish and grey felspathic trachyte, splitting into thin flags and rhomboïdal masses. When we again started, notwithstanding the wild and stony nature of the ground, and the fissile character of the rocks themselves, no attempts had been made to clear a path; the place was left to the care of nature, and we seemed to be riding over a slate quarry. Our course was now N.W. for nearly two miles, winding along the side of the hills sloping to the N.E., and on which large herds of cattle and brood mares were grazing. After crossing another deep ravine and elevated ridge, our course changed to W.N.W. The view towards the N.E. was very extensive, overlooking the course of the Tchoruk, with much hilly country intervening, and backed by a lofty range of snowy mountains. An immense number of gigantic vultures and eagles were gathered together on a piece of rocky ground near the road, but I could not approach near enough to get a shot.

A little before twelve we again came upon limestone rocks, dipping nearly N.W. at a high angle, and further on we found beds of sandstone and shale: they appeared to belong to the same formation as those passed yesterday, forced into an anticlinal position by the protrusion of igneous rocks. The only difference I could perceive, was that the limestone here was more crystalline, and contained a few traces of crinoïdea. Two miles further, in a S.W. direction, we reached the little village of Campor, where we had an awkward specimen of Turkish obstinacy, our guides refusing to go on without changing horses, although Ispir, by all accounts, was only two hours further. We settled the matter by urging on our own horses, and engaging a new guide to lead the baggage horse.

Leaving the valley and river of Campor, flowing through a narrow ravine towards Ispir, we proceeded by a winding road over the hills for about two miles, and crossed two rapid torrents descending by rocky gorges from the S.S.E. We then quitted the ravine, and continued in the same general direction of W. by S. over ground sloping north to a valley watered by a small river, which receives all the streams we had crossed since leaving Campor, and which falls into the Tchoruk immediately below Ispir. As we advanced, cultivation and vegetation rapidly increased; the hills were covered with wild flowers, amongst which lupins of all colours were conspicuous; and the air was perfumed with the sweet fragrance of the flower of the jujube-tree.

At a quarter after four we came in sight of the picturesque castle of Ispir, situated on a rocky point in the middle of the valley, which is here much contracted. The castle commands the narrow pass by which the Tchoruk Sú enters the mountains; and at its foot are a few flat-roofed underground houses, adorned with a mosque, honoured by the residence of a Waiwoda, and dignified with the vague name of Cassaba, or town. I had been led to expect a place where our wants could be supplied, and various arti-

cles of provisions procured, but it contained not a single shop or means of obtaining anything we wanted.

I proceeded at once to the Agha or Waiwoda, whom I found suffering from a violent attack of fever. He offered me a konak in a neighbouring house, or in his own, if I preferred it. I accepted the former, as more independent; and in a short time I received a visit from him, when we adjourned to the garden over the roof, where we had our pipes and coffee under the shade of the mulberry-trees, and in sight of the picturesque ruins of the castle, with as much conversation as the limited means of an interpreter would admit of. It was my intention to have proceeded from hence across the mountains of Lazistan to Rizeh and Trebizond, but the governor strongly dissuaded me, stating that the country was inhabited by a wild, murderous set of people, not yet subdued by the government, and over whom he could exercise no authority. He further added, there were no towns or villages on the road, the distance being forty hours, but only single houses here and there; that I should find neither accommodation nor provisions, and that he would not be answerable for my safety; that the roads, moreover, were worse, and the country more hilly and mountainous, than between Bardes and Ispir. With such discouraging information I was obliged to give up my intended plan; and my principal object being to get into Asia Minor as soon as possible, I determined to ascend the Tchoruk as far as Baibourt, and thence return to Trebizond; by which means I should at least have an opportunity of examining the castle of Baibourt and the silver-mines of Gümisch-khana.

In the course of our conversation the Waiwoda bewailed his miserable situation, banished as it were to this desolate country, without society and without resources, and from which he expressed a hope that he should soon be released. I found this feeling to prevail amongst several of the provincial governors, and I always considered it a proof either

that they could make no money, or that they had already made enough. He also complained much of the want of a physician, and said that the only thing which would cure him was a little rum, whereupon I gave him the remains of my brandy-bottle, although I expressed to him my doubts of its doing him much good while his fever was raging.

CHAPTER XIV.

Ispir—Account of its Castle—A day spent with a Turkish Waiwoda—Journey to Baibourt—Kara-Agatch—Course of the Tchoruk Sú—Legend of the Haystack—Reach Baibourt—Visit the Castle—War with Russia—Balahore—Journey to Gümischkhana—Account of Silver-mines—Their produce—Return to Trebizond—Trade and Climate—Mosque of Sta. Sophia.

Wednesday, June 22.—I was glad to find, on inquiring this morning, that the Waiwoda was not the worse for his dram, and that his attack of fever was over; but he was in a great state of annoyance at the government having called upon him to furnish more recruits, having for the last two months been unable to procure any. As there was some difficulty in procuring horses to carry me to Baibourt, I was detained here the whole day, and was enabled to obtain a meridian altitude of the sun, which placed Ispir in 40° 24′ 30″ N. lat. The castle, which I afterwards visited, is built on the right bank of the river, on a mass of porphyritic trachyte, which appears to have been rent asunder from the mass of igneous rocks forming the gorge through which the river flows. The outer walls of the castle are in ruins; these have been built of rough stones, irregularly placed together, and cased with blocks of travertine. On the summit of the rock, amidst an indiscriminate mass of ruined walls and towers, are two buildings which deserve more particular notice. They are built of large square hewn blocks of travertine, with joints fitting closely together like an Hellenic work; but, although the masonry is the same, they differ greatly in their style of architecture. The building near the centre of the ruins appears to have been a Greek church, having a semicircular bema at the east end, and a niche of somewhat similar appearance on each side. Its

length is about sixty feet by forty in width, having a low round entrance on each side, but with no peculiar ornamental architecture about it. The other building is smaller and square, and, from the minaret still attached to it, seems to have been a mosque. The arched entrance is enriched with arabesques, in the Saracenic style, which also prevails within; the roof is extremely elegant, resembling in a great measure the style of the most richly decorated buildings of Anni. About twelve or fourteen feet from the ground, arches spring on three sides from pilasters which fill up the corners of the room, projecting about three feet. A smaller square is thus formed above the crowns of the arches, with highly enriched cornices. This square is then converted into an octagon by filling up the angles, the lower parts of which, having nothing to rest upon, are finished off with the peculiar mitre-shaped Gothic ornament and drops, so frequent at Anni and Erzeroum. The whole terminates in an octagonal conical roof. I fear this description is imperfect, but I have attempted it in the hope of conveying to my readers some idea of one of the most pleasing structures I saw in this now barbarous country.

Several of the gateways leading to the fortress still remain entire; all have been cased with the same soft stone, which in many instances has been removed. Over two of them are inscriptions in Persian or Cufic character, which the Waiwoda assured me were not in the Turkish language. One of these gateways was interesting, from the form of the arch on the inside being different from that on the outside; as seen from within it appeared round, whereas from the outside it had a slight ogive curve, which is decidedly Saracenic. I could learn nothing respecting the founder of the castle, but should be inclined to attribute its origin to the ninth century, when the Arabian caliphs had obtained possession of Armenia, after having destroyed the Persian dynasties; and that one of its principal objects was to defend the rich plains of the Tchoruk Sú against the hostile incursions of the mountain-tribes of Lazistan, who

still preserve their character for rapine and plunder. These Lazes represent the ancient Colchians, who were in all times renowned for their violence and predatory habits.*

With regard to the modern history of the castle, I learnt that about thirty years ago it was in the possession of Mehemet Oglu, a Dere Bey and rebel chief, who had incited the whole country to rebel against the Porte. Tahiya Pacha, then governor of Trebizond, having succeeded in reducing it after a long struggle, totally destroyed it. The fort, however, resisted for a time, and was the resort of all the turbulent spirits of Lazistan, who flocked thither in such numbers, as to bid defiance to any force which the government could send against them. It is only within a few years, since the destruction of the janissaries, that a governor has been able to reside here.

The history of this Tahiya Pacha is that of many a Turkish governor. Some time after this success he fell into disgrace with the Porte, and Chosrew Pacha was sent to take his head off. Tahiya collected together what followers he could muster, and made a show of resistance, but was vanquished. He made his escape into Russia, where he resided for some time, and was afterwards, through Russian influence, pardoned, and allowed to return to Constantinople. After remaining there some time he was again employed by the Porte as Kaimakan in a distant province. His evil destiny, however, was not appeased; his fate was not averted, but only delayed; and he at length forfeited his life for an imaginary crime, or for misdeeds long since supposed to have been pardoned.

In the afternoon I visited the Waiwoda, who had urged me to stay two or three days with him; here I had a good opportunity of seeing how a Turk spends his afternoon. I found him surrounded by his attendants, seated in a niche or alcove built by the road side over a cool and bubbling fountain. After smoking a pipe, he proposed walking to see the river, to which I gladly assented, ex-

* Gibbon, Decline and Fall, c. xlii. Lamberti Relation de la Mingrelie.

pecting a walk along its rocky banks; but we had hardly proceeded 200 yards when we reached the bridge, which was the limit of his tether; and, selecting the shady side, we seated ourselves on the grass near the water's edge. Here, while discussing a plate of cherries, my host took occasion, in allusion to different articles of my dress, to praise England and its productions, admitting that the Turks were an idle, ignorant people, whose customs would admit of no comparison with those of Frangistan (Europe), and added that the English were very rich and the Turks very poor. To this I answered, that one reason was that in England, when a man became rich by his industry or exertions, the law enabled him to keep his property, and to leave it to his family on his death, and that the government did not arbitrarily step in and carry off the whole or the greater part of it; at which he significantly stroked his head and looked very grave. After another pipe we made a move, and returned to the meadows opposite his konak, where carpets and cushions were brought out and spread under the trees; and pipes, with the addition of coffee, were again produced. Here I was treated with a novel kind of entertainment, being roused by loud shouts and cries, and on looking round, I saw an unfortunate wretch lying on his back before the door of the konak, with his heels up in the air, tied to a log of wood held up by two men, whilst others were inflicting the bastinado on his naked soles with great rapidity. On appealing to the governor to know the meaning of this proceeding, he was pleased to say that in consequence of my presence he would let the man off with a slight punishment, although he richly deserved more for his turbulent and quarrelsome behaviour, and ordered him to be set at liberty. On being released he could hardly move, and was roughly pushed out of the way into the house. He had been quarrelling with and striking an old woman; but the aggravation of his crime was having used indecorous language to a woman.

The district, over which the Waiwoda's authority extends, contains about fifty villages, of from five to fifty houses each; even Ispir has only fifty, although formerly it was much larger. The governor had been called upon to furnish thirty young men as conscripts for the new levies, but had been two months in vain endeavouring to procure them. He now threatened to make the district pay 5,000 piastres (50*l.*) for each man, if they were not forthcoming in three days, but from what I heard of the country, he will have great difficulty in raising either the money or the men; and I scarcely saw any but grey-bearded old men and helpless children. In fact, many parts of the district were becoming depopulated in consequence of the new measures, independently of the effects of plague and other visitations.

Thursday, June 23.—Notwithstanding the pressing solicitations of the Waiwoda, I started at half-past seven for Baibourt, distant eighteen hours, with very bad horses, along the southern or right bank of the Tchoruk Sú. To the north the valley, which is interspersed with many patches of cultivation and trees along the river side, is bounded by a lofty range of bleak and rugged hills. Two miles S.W. from Ispir the river was flowing rapidly between steep hills, and our direction changed to west, passing a bridge over the Tchoruk, leading to copper-mines (Bakr Maden) situated in the hills to the north, beyond which was another large stream falling into the Tchoruk Sú from the N.N.W. Amongst the many wild shrubs and flowers on these hills, I was much struck with a species of honeysuckle, with which they were covered. The flower was small, and without smell, but extremely ornamental. There were also some oak trees, but none of any large size.

Between five and six miles from Ispir we passed a road leading to the Armenian monastery of Sip Ovanés, and the tomb of a Turkish santon called Hussein Dede, situated about three miles to the south, amongst the limestone hills, between the ravines of which I occasionally got a glimpse of a more distant range of snowy mountains. We con-

tinued in the general direction of W.S.W., winding over the hills and diverging from the bed and valley of the Tchoruk Sú, into which several large streams from the mountains to the north emptied themselves, during the day's journey. In these mountains silver-mines were reported to exist at some distance, which were formerly worked under the direction of the miners of Gümischkhana during the existence of the Dere Beys, who in this part of the country yielded only a limited obedience to the orders of the Porte. On one occasion these mines were attacked and plundered by a neighbouring chief, and although the workmen made their escape, the mines have never since been opened. As we advanced, the hills over which we travelled became bleak and barren, producing only a few scattered junipers and other small shrubs. The rock of which they consisted was limestone; and huge gigantic masses, apparently boulders, twenty to twenty-five feet in diameter, were scattered over the surface.

At two P.M., after winding to the top of a spur of the great chain of hills on our left, we obtained a magnificent view of the deep and winding gorges which, to the west, marked the course of the Tchoruk Sú, although the river itself could not there be seen; but its course was visible two or three miles to the north formed by the junction of two large rivers, the Tchoruk flowing from the west, and another from the N.W. Descending into a deep ravine, the rock consisted of a compact or trachytic conglomerate, of a black ash-grey colour, containing boulders of porphyritic trachyte, and penetrated by numerous dykes. After fording the stream we ascended the other side of the valley, and continued over a succession of hills and ravines for nearly four miles, until we reached the small but neat-looking village of Kara Agatch, about four o'clock. But I was told there were only fifteen families, although I counted nearly fifty houses, many of which were used as stables for horses and cattle, their outward appearance differing in no respect from the dwellings of the inhabitants.

In wandering about the village, as I constantly did when not too much fatigued with my day's journey, I found an interesting section of columnar amygdaloïdal trap, reposing upon horizontal sand, the upper portion of which had been much altered by contact with the trap rock, which had apparently flowed over it in an ignited state from a high conical hill to the N.N.W. of the village. That portion of the sand which was in immediate contact with the trap was reduced to a state closely resembling it, but much softer, and had entirely lost all traces of horizontality. In the downward section it gradually became less homogeneous, approaching more nearly to the subjacent unaltered sandstone, which was probably also of volcanic origin, *i. e.* mud and ashes thrown out from the same crater previous to the eruption of the lava.

Here I was unable to procure fresh horses, there being none in the village except those of the spahi. These spahis are the remains of the former cavalry of Turkey, who were stationed in different districts for the purpose of collecting duties, tithes, and taxes, for the government. On the establishment of the new Tactico or Nizam force, all the spahis who wished to preserve their privileges were compelled, whether old or young, to enter into the regular cavalry, but in time of peace were allowed to reside in separate villages. This one (and generally only one is found in each village) still continued to collect the taxes for the government. I was therefore obliged to take on the wretched cattle of Ispir nine hours further, to Baibourt.

Friday, June 24.—A shower of rain which fell last night had greatly refreshed the air, and we started soon after six, over undulating hills in a W.S.W. direction, slightly diverging from the Tchoruk, until we descended into a deep ravine, through which a stream flowed north. Ascending a steep and wooded hill well covered with low oak-coppice, and juniper, and smaller aromatic plants, we continued over the hills for some miles, crossing several streams, all flowing to the north, until we reached a

miserable village between eight and nine miles from Kara Agatch. We had not seen the Tchoruk Sú all day, the deep valley on our right, which received all the streams we had crossed, being separated from that of the Tchoruk by a high chain of hills, extending east and west for several miles between the two valleys; but soon after leaving this village we crossed the ridge, which connected it with the mountain range to the south. As we advanced the scenery improved greatly; our general direction was still west, over hills well covered with wood which occasionally deserved the name of timber, and about eleven A.M. we were riding through beautiful park-like scenery. The smooth and gently sloping hills were covered with a rich short grass, while clumps and single trees were dotted over it in every direction.

At a quarter before twelve we descended into the rich plain of the Tchoruk Sú, flowing through a flat and marshy bottom, which here, as well as near Baibourt, was covered with a thick and tangled mass of vegetation, the resort of wild boars and other kinds of game, whether birds of the air, or beasts of the field. At twelve we passed the site of a ruined village, situated on the banks of a small stream flowing down from a rocky mountain valley on the left. Another village called Milchi, on the north side of the Tchoruk, was immediately opposite to us, where Mehemet Oglu, the son of the Dere Bey, who was conquered at Ispir by Tahiya Pacha, was now residing in comparative poverty and insignificance; he was anxious to have returned to Ispir, but the government, fearing his family influence and turbulent disposition, had refused to comply with his request. Milchi, like many other villages in this part of the country, is under the jurisdiction of Gümischkhana, and like them is obliged to furnish a certain number of men for the mines, in return for which they are exempt from taxes and contributions, and, until this year, from furnishing recruits for the army. I was told on this occasion that at Caban Valesi in Kurdistan, six days' journey from Diar-

bekir, there are extensive copper-mines, for which the director of the mines of Gümischkhana is obliged to furnish annually 500 men to cut wood. I presume they return home every year after the season for cutting is over, as this mining district could not sustain such a constant drain. Here again I had occasion to regret the difficulty of obtaining real information from a Turk, who, though he makes them with great fluency, is for ever loose and contradictory in his statements.

At half-past twelve, after crossing the plain, we ascended low sandstone hills in a S.W. direction, and in half an hour reached the large straggling village of Malassa. The extent of its gardens and the neatness of its streets showed it to have been once a considerable place, but it was destroyed by the Russians during the last war. The inhabitants are chiefly Armenians, and our guides described it as a Giaour Kieui. From hence we proceeded over sandy hills, through which trap rocks have burst up, three miles W.S.W., until we descended to the banks of the Tchoruk, here flowing in a winding course from S.S.W. to N.N.E. through a well-cultivated plain about a mile in width.

Ascending the narrow valley on the right bank of the river, we passed at half-past two an enormous mass of rock lying between the river and the road, at least forty feet high. The following tradition was told us by the suriji respecting it:—A village once stood near the spot, and the rock in question was a haystack belonging to an old woman; one day a traveller arrived on horseback, and requested food for his hungry steed, but the old woman refused to comply with his request, in consequence of which, to punish her avarice and want of hospitality, her haystack was turned into stone. While listening to this tale, I had almost forgotten to look about for the real cause of the singular occurrence, but soon perceived that the hill to the left was capped with a thick bed of limestone, of which the block in question had once formed a part. This limestone, dipping W. by S. 15°, rests conformably upon marly sandstones,

which being washed out by the erosive action of the waters of the Tchoruk and other streams, would leave the superincumbent limestone unsupported, in consequence of which it would fall into the valley; the hills on either side higher up the valley consisted of the same rock, which sometimes formed cliffs of considerable height, and abounding in caves.

Above the haystack the valley became much narrower, and the hills sloping at an angle of 40° came down to the edge of the river, here flowing with great rapidity; the barren rocks gave the scene a bleak and dreary look, only enlivened by the rapid motion of the river and the herds grazing upon the cliffs. At twenty minutes before four the valley again widened; the castle of Baibourt, which had been for some time visible, appeared upon an insulated rock on the other side of the river which washed its rugged base, while the hills on our left were covered with villas and gardens, and bore a cheerful aspect. We crossed the Tchoruk Sú by a wooden bridge below the castle, ascended the low hills which stretch to the north, and on reaching the summit found ourselves at the entrance of the ruined town. The place had been entirely destroyed, and presented a melancholy example of the recklessness of Russian warfare. After traversing several ruined and deserted streets, we reached the southern extremity of the castle hill, where the river, after flowing through part of the town, enters the rocky gorge, and having again crossed it by a wooden bridge, which brought us to the Armenian quarter, I soon found myself comfortably housed. There are two other bridges, equally of wood, higher up the stream, which is said to contain plenty of fish.

Saturday, June 25.—Before starting for Gümischkhana I visited the castle of Baibourt, the ruins of which cover a considerable extent of ground, commanding the narrow pass through which the Tchoruk Sú flows. The principal gateway faces the S.W., a considerable space being left between the inner and the outer wall, which descends lower down the hill side there than elsewhere. Over the gateway were

several Turkish and Arabic inscriptions, and a large lion very rudely sculptured on each side under the arch. Near the southern extremity were the remains of a vaulted apartment, the arches of which were slightly pointed; but I was much struck with the beautiful regularity and neatness of the masonry of the principal or inner wall, which was cased with square Saracenic blocks. The numerous towers along the western wall were either square, circular, or triangular, and equally well built. Near the summit of the hill were the remains of a church which my Armenian guide confessed was Greek, of very rude construction, different from the other parts of the building, and having a semicircular bema at the east end, the wooden roof of which appeared comparatively recent. Numerous Turkish and Arabic inscriptions were carved upon the outside of the upper wall, and on some of the stones a diamond-shaped ◯ hollow had been carved, while others had three circles ◯◯ This N.W. angle of the fortress is most elaborately worked and finished, the angles of the wall sloping inwards near the top. The wall is finished with a neat cornice, immediately below which is an inscription in large Arabic characters, while about fourteen feet from the ground a neat scroll runs along in a wavy line, which gives a finished and elegant appearance to the whole.

Descending from the castle I mounted my horse and visited some Turkish tombs on the summit of another high hill to the west of the town, which at a distance had rather an imposing aspect; I found however nothing remarkable in their style or construction, though they were regarded by the Turks with great veneration. I returned to my konak in time to take a meridian altitude, which placed Baibourt in 40° 13′ 30″ N. lat. I had here occasion to send for a Turkish blacksmith or Albahn to shoe my horse, and was much struck with the grotesque appearance of the man who officiated in that capacity; nor was his large and awkward instrument for paring the hoof less rude. I thought he would have cut his arm off every time he used it.

I left Baibourt at one P.M. for Gümischkhana, and soon reached the summit of a low range of hills, extending from north to south, whence we descended into a narrow plain, opening to the north into a large tract of level country watered by the river of Balahore flowing eastwards into the Tchoruk. Several villages were scattered about this plain, amongst which one was pointed out called Char, where, during the late war, 100 Russians, who had quietly entered the place after the capture of Erzeroum, were fallen upon, and massacred by the Turks. In order to avenge this unprovoked attack, General Paskewitch immediately came from Erzeroum, drove away the inhabitants, and pillaged the surrounding country. The Russians visited Baibourt three times while they had possession of Erzeroum. On the first occasion they destroyed the fortress and the houses in it; but it was not until their third visit that they destroyed the town itself, in which a Pacha had shut himself up with several thousand men. I reached Balahore at half-past five, and started early the following morning for Gümischkhana. Three miles from Balahore I fell in with a party of Frank travellers, German missionaries, proceeding from Trebizond to Tabreez on their way to the station in Karabagh. Within five or six miles of Gümischkhana the river was so much lower than when I passed it before, that the suriji led us for some distance along its bed, crossing and recrossing it several times. As we descended the heat became very oppressive, and the valley being narrow, and confined between high granite rocks, it was very tantalizing to be thus exposed within a stone's throw of the shade of the gardens which lined the river banks immediately below the road.

On reaching the lower town of Gümischkhana I determined, as my object was to see its silver-mines, to proceed at once to the upper town, about a mile and a quarter further, situated in a wild and picturesque glen about half way up the mountain side. The road led through a narrow val-

ley, the lower part of which was well wooded and cultivated, but this soon ceased, and the ascent became steep and rapid for some distance, after which we entered a vast rocky amphitheatre, where I was much struck with the picturesque position of the town. The steep rocks rose on every side, while the houses, arranged one above the other, covering the whole extent of the area, appeared stuck against the rocky sides like swallows' nests against a wall, and being built of mud, looked as if a heavy shower of rain would wash them off. After wandering through the precipitous and ill-paved streets, I at length reached an excellent konak in the house of the director of the mines, where I arrived soon after three.

Monday, June 27.—The silver-mines of Gümischkhana (silver-house) have the reputation of being the richest and most important mines of the kind in the Turkish dominions. The town is also considered as a seminary for the instruction of miners throughout Turkey; and I have been constantly told, in very distant parts of Asia Minor, when making inquiries respecting mines in the neighbourhood, either that the miners came from Gümischkhana, or that they were obliged to furnish miners for Gümischkhana, or that a connexion of some kind or other existed between it and Gümischkhana; besides which the director of the mines here is considered as the superintendent and chief of all the mining districts in Anatolia. I was therefore the more anxious to gratify my curiosity, both by visiting the mines themselves, and by collecting whatever information I could respecting the quantity and quality of ores obtained, the modes of working the mines, and of the management of the establishments; and I greatly regret that, notwithstanding all the trouble I took, the details contained in the following account are so scanty and unsatisfactory; but, as I have already observed, whenever you attempt to procure exact information from Orientals, and question them closely, they invariably contradict them-

selves; and their testimony is given in such a loose and careless manner that it is difficult to give faith to any of their various statements.

The only mine now worked is situated about a mile and a half to the S.E. of Gümischkhana, beyond the hills which surround the town; but in order to reach it we were obliged to go over the eastern brow or wing of the rocky amphitheatre. These hills, which rise in perpendicular cliffs, consist of limestone, shales, and indurated sandstone, while granitic rocks in a state of decomposition also crop out in several places. Notwithstanding my adventures in the copper-mine of Chalwar, I could not resist the temptation of personally inspecting this one also, which, although not so deep or difficult as the other, is much more dangerous. It was not shafted up at all, the galleries being only supported by the natural rock. The direction of the principal shaft sloped 20° to the south, but other galleries branched out in all directions, sometimes spreading into capacious chambers, at others passing through low and narrow passages, and either descending perpendicular chasms, or proceeding onwards horizontally. In one of these chambers the wet ground sloped to a vast lake or reservoir of great depth, beyond which I could distinguish by the light of their lamps several workmen removing the rocky wall itself for the sake of the ore which it contained. On the whole there appeared to be neither method, order, nor prudence in the manner in which they worked. The best ore is found in lumps or nodules in the middle of the vein, consisting of a soft black clay, which also contains a small quantity of metal. The whole face of the hill near this mine was covered with the remains of old workings and galleries, in which the ore had been exhausted.

Returning to the town I visited the furnaces, where nothing was doing, although about 120 okes of ore are extracted daily from the mines. The granitic rock ap-

peared above the surface in a ravine in the town; and, by means of much cross-questioning through an interpreter, I ascertained from the director, who accompanied me, that the metallic veins, although first found in the rocks overlying the granite, often extend downwards into it, and that some of the richest ores are found there. On my remarking that I had observed the same rock for several miles along the road to Balahore, my host observed that those mountains were called the Gümisch Dagh, or Silver Mountains, and that much argentiferous lead was formerly obtained there, but that the mines had been latterly abandoned in consequence of the water having got in, and that none were now worked except the single shaft which I had entered.

With regard to the produce and value of the mines, the director, who with his family has had the management of them for the last eighty years, gave me the following account:—All mines in Turkey belong to the government, but, according to the Turkish system, they are not worked on the public account, but are farmed out on certain conditions highly favourable to the government. These mines produce gold, silver, and lead; the two former being claimed by the government on paying a small nominal price for them, very much below the real value;—viz., for gold they pay 4 piastres per drachm, which at Constantinople is worth 50 and for silver, which is worth 105 paras per drachm, they pay only 25 paras; while the director keeps the lead on his own account, and to cover all the expenses. The annual produce is from 250 to 300 drachms of gold, and about 30 okes* of silver, and 120 okes of lead for each oke of silver, in all 3,600 okes of lead, which sells for 80 to 100 paras† per oke. Another advantage enjoyed by the director is the right of purchasing whatever charcoal is required for smelting (and one load of charcoal—100 okes—is necessary to smelt three okes of lead) at the low price of two piastres

* The oke equals 2¾lbs., and contains 400 drachms.

† Forty paras=1 piastre=about twopence halfpenny British.

per load, being one-fourth of the usual market price; the villages in the neighbourhood are obliged to furnish him whatever quantity he requires at this price, in return for which they are exempted from taxes and other contributions.

The number of men employed is between 50 and 60, half of whom work in the mines, and the other half at the furnaces; they only receive 70 paras a-day (a trifle above 4*d.*), but the town is obliged to find the required number. No work is done at the smelting furnaces during the months of March, April, and May, in consequence of the scarcity of charcoal. The operation of burning or smelting the ore lasts about six days; during the first five all the lead runs off, after which, on the sixth day, the silver runs off in about three hours—the small quantity of gold running out with the silver, from which it is afterwards chemically separated.

This was the account I received from the director himself, who complained that the terms were so unprofitable that it was hardly possible to carry on the business; and certainly if the above accounts are correct, the undertaking must be a ruinous one. Both views are probably true, viz., that the accounts are exaggerated, and yet the undertaking is at a loss. According to the director's account the annual expense appears to be 30,346 piastres, while the returns are only 17,700 piastres.

50 men at 70 paras per day = 3500 paras for 365 days = 1,277,500 paras, divided by 40 gives 31,938 piastres, from which must be deducted one-eighth, as no work is done at the furnaces during three months, leaving 27,946 piastres.

Charcoal $\frac{3600}{3}$ okes = 1200 loads at 2 piastres = 2400 piastres.

	27,946
	2,400
Total outlay . .	30,346 piastres.

RETURNS.

	Piastres.
Gold 300 dr. at 4 piast. . . .	= 1,200
Silver 30 okes = 12,000 dr. at 25 paras = 300,000 ÷ 40	= 7,500
Lead 3,600 okes at 100 paras = 360,000 paras ÷ 40	= 9,000
	17,700

Showing the returns to be little more than half the outlay, which is at all events not a very profitable concern to those employed; probably a much larger amount of lead is obtained. The advantages derived by the government, on the other hand, appear considerable.

	Piastres.
Gold 300 dr. worth 50 piastres . .	= 15,000
Silver 12,000 dr. at 105 pa. = 1,260,000 ÷ 40	= 31,500
	46,500
From which is to be deducted the amount paid to the mines as above,—	
Gold . . 1,200	
Silver . . 7,500	
——	8,700
Remains clear gain . .	37,800

From which must be deducted the amount of taxes not paid by the districts which contribute labour and fuel.

Having completed my very imperfect inspection of the mines, I started soon after one from Gümischkhana, hoping to be able to reach Trebizond the following day; but was compelled to halt at a small hut near Stavros at half-past six, as it was too late to attempt ascending the mountain-pass with the view of reaching Karakaban. The village of Stavros was deserted, the inhabitants having betaken themselves to their Yaila, to procure pasture for the flocks.

Tuesday, June 28.—I started before five this morning,

and found the steep and narrow road up the pass much injured by the late rains. By seven we had reached the elevated undulating ground, which forms the summit of the ridge, and found the weather cold and windy. To the north thick fleecy clouds and mist were ascending the valleys from the coast, and obscuring the view; but these were dispersed on reaching the summit of the range, as soon as they came within the influence of the warmer air on the southern slope of the hills. As we advanced we were enveloped in them, and were soon wet through with a drizzling rain, in which form the mist was condensed. We here overtook a large caravan from Diarbekir, the leader of which gave us some information respecting the movements of the Turkish tribes and Reschid Pacha.

Soon after nine we reached a more cultivated and verdant country. Immense woods of fir and beech were occasionally visible below us, as the curtains of clouds were for a few moments withdrawn. At Karakaban I halted for an hour, in the vain hope that the rain would cease, and was much disappointed in not having been able to ascertain the point from whence the sea would be first visible along this line of route. Soon after leaving Karakaban we entered the magnificent and luxuriant woods before described, where vegetation was most abundant. The rhododendrons and azaleas, now out of flower, but flourishing and strong, formed an impenetrable underwood in this beautiful natural garden, which, notwithstanding the continued rain and the execrable state of the roads, was still a most lovely sight. I had seen it before in the luxuriance of its gay attire, when the azaleas and rhododendrons were in flower; and now, when nature was refreshing it with genial showers, it was scarcely less pleasing.

Descending by a steep and muddy road from this hog's back ridge we met a large caravan of at least 250 asses, carrying iron from Trebizond to Erzeroum. These useful and generally patient animals have, in this country, a decided antipathy to mud; along dry and sandy roads they

get on admirably, but are completely overcome when travelling through a muddy country. The whole caravan was completely exhausted, and the road for above a mile was literally strewed with straggling animals, most of which had laid themselves down in the mud, and were waiting until the muleteers could relieve them of their burdens. The bars of iron lying along the road appeared to have but a bad chance of ever getting to the top of the hill.

I reached Jivislik at half-past two, and my horses being knocked up, determined to halt there for the night. The inhabitants of this mountainous region are a remarkable people, and like the Lazes, whom they are said to resemble in many respects, do not live in villages, but in detached houses on the mountain side. They are the representatives of the ancient Macrones, who, according to Xenophon* and Strabo,† inhabited the country above Trebizond, and who, according to Herodotus,‡ were of the same origin as the Colchians, who may be considered as the ancestors of the Lazes. Another interesting peculiarity is, that both in Trebizond and the neighbouring mountains are many Greek Turks, or Turkish Greeks, a race of people who are in reality Christians, and observe the Greek rites in secret; but who, from prudential motives, profess the state religion of Mahometanism, submit to be circumcised, attend the mosques, and practise all the other ceremonies enjoined by the Mahometan religion. In support of the notion that they may be the descendants of the Macrones, it may be remarked that Herodotus mentions that they also practised circumcision.§ Hence it is probable that, although they are not aware of it themselves, it is an ancient usage in the country, and not derived, as they imagine, from the Mahometans. There is also a very striking peculiarity of countenance and expression amongst the natives of this mountainous district, which I afterwards traced for a considerable distance along the coast. A remarkable roundness of feature, large

* Xenoph. Anab. iv. c. 8, 17. † Strabo, lib. xii. c. 3, p. 548.
‡ Herod. lib. ii. c. 104. § Ib.

mouths with turned-out lips, and a heavy chin, were amongst their chief characteristics.

Wednesday, June 29.—From Jivislik downwards the Surmel Sú is also called the Deirmen Dere Sú, or river of the valley of mills. The valley here was highly cultivated, and the Indian corn was already planted out. Hemp too is raised in considerable quantities, and the rich vegetation of the wooded hills spoke in favour of a genial climate, notwithstanding the fogs and rains which are driven across the Euxine. After a ride of five hours and a half from Jivislik to Trebizond, I was well pleased to find myself once more at the hospitable gates of the British Consulate, where I was kindly welcomed, and soon recovered from the fatigues of the last three weeks.

A knotty question of international law was in agitation between the Turkish and Persian governments at this time, which attracted much attention during my short stay here. About the beginning of 1835 a tribe of Kurds emigrated of their own accord from Persia into Turkey, and established themselves near the frontier. The Prince of Choi, an uncle of the Schah, displeased with them for having left his government, made an expedition across the frontier, without the consent of the Persian government, attacked and plundered the Kurdish camp, and carried off their flocks and some of their women. Indignant at such conduct, the Kurds determined to be revenged, and after waiting some little time, in the month of April of the same year they plundered the first Persian caravan they fell in with. Complaints were immediately made to the Turkish authorities, who were, to a certain degree, responsible for the conduct of the Kurds. A meeting of commissioners took place at Erzeroum, and Essat Pacha on the part of the Turks (the Kurds having in the mean time agreed to restore the plunder or its value to the Turks, and having delivered up the sons of their chief as hostages) agreed that the Turkish government should reimburse the Persians for their losses. Some time afterwards

Essat Pacha was persuaded to give up the hostages, and the Kurds were induced to return to Persia, and withdraw themselves from Turkish rule. When the Turks perceived this, and that they could no longer exact payment from the Kurds, they at once refused to pay the Persians, who replied that they had nothing to do with the Kurds, that they had made no arrangement with the Kurds, but with the Turks, and from the Turks they expected compensation. The question was not yet decided; the whole transaction was based on deceit, intrigue, and dishonesty, and all the parties engaged in it acted in a most unprincipled manner.

The climate of Trebizond is backward, and liable to constant changes; chiefly owing to the cold winds with rain and fog, which are brought across the Black Sea. Figs and grapes do not ripen before October or November, and in general the gardens produce little fruit. The vines are trained to large trees, the branches of which prevent the fruit from receiving the benefit of the sun's rays; a few mulberries and pomegranates grow in the neighbourhood. Hemp and linseed are also cultivated, of which the Pacha is obliged to furnish a certain quantity to the Porte annually, as well as corn, barley, and copper; but the mode of procuring these supplies, and taxing the inhabitants, is left to his own devices and ability. The trade of Trebizond is, however, becoming daily more important; besides that with Persia, a new branch has lately been opened with Diarbekir and Arabkir, where is a great demand for British cotton twist, which is used in the native looms worked up with silk. In the bazaar the shops are well supplied with English cottons and printed goods; but most articles of this kind which arrive here pass into Persia by way of Erzeroum.

A few days after my return I visited the ruins of the Greek church of Sta Sophia; we left the town by the western gate, having passed the two picturesque bridges over the ravine already described. A narrow road between high walls and gardens soon brought us to a green

plain, called the Capu Meidân, surrounded by gardens and fields opening to the sea on the right hand, and on the left rising up towards the hills. In front we had a distant view of the bold range of heights which terminate in Cape Yoros, the Hieron Oros of the ancients. The church of Sta Sophia, close to the sea shore, has been converted into a mosque by the Turks, and is in a sad state of decay. On the south side is an open porch in the Byzantine style, supported by two high slender columns, from which spring three round arches, contained within a larger one springing from each end; a small frieze, representing angels, saints, and other figures, much mutilated by the Turks, extends in a continuous line over the smaller arches. Above the centre of the large arch is a carved figure of a double-headed eagle; a similar figure is let into the outer wall at the east end of the church, which is circular, as well as the two sides. The centre is octagonal, and built in a style very superior to the rest of the building. A neat border of echinus pattern runs round it immediately below the roof, and another still more ornamental lower down. The walls within are stuccoed, and have been painted in fresco, but the Turks have almost entirely destroyed the paintings. The once-beautiful mosaic floor is also sadly injured; but in one of the compartments I found the representation of an eagle destroying a hare. The roof is supported by four handsome marble columns. Immediately adjoining is either a belfry or baptistery, in which there have been some fresco paintings, with Greek inscriptions stating whom they represented, and when and by whom they were executed, but so much injured, that I could not make out the artist's name or the date of any one of them.

CHAPTER XV.

Leave Trebizond—Scenery on the Shores of the Black Sea—Platana—Akjah Kaléh, anc. Cordyle—Character of the Inhabitants—Inji Liman—Cape Yoros, anc. Hieron Oros—Iskeféh Dere Sú—Gellita Kaléh—Kerasoun Dere Sú—Village of Fol—Buyuk Liman—Cape Kereli, anc. Coralla—Eleheu, anc. Philocalea—Goolak Kilisséh—Ferry over Tireboli Sú—Reach Tireboli, anc. Tripolis—A Turkish room—Silver-mines near the river, anc. Argyria.

On leaving Trebizond I determined to proceed along the coast to Sinope by land, though told I should meet with many difficulties, arising from the ignorance of the natives, and from the impracticable state of the roads. The former of these causes I endeavoured to obviate as far as possible by engaging a Tatar or a Chavasse, having been convinced by the experience of my last journey that I should thus get on with greater facility, and meet with more attention, both from the authorities and the inhabitants. On the application of the consul, the Governor placed at my disposal Hussein Agha, a Constantinopolitan Tatar and Menzilji of Trebizond.

Like the rest of his order he dearly loved his pipe and his ease; but notwithstanding his want of activity he always procured me horses without trouble, and secured me a comfortable konak wherever I wished to stop. Unless a great change had taken place in the behaviour of the Tatars, I do not understand the difficulty which many former travellers complain of having experienced in managing these personages. It is true that, like all their countrymen, they have high notions of their own importance and the position of their country, and regard their own class as one of peculiar merit: it is also true that they are inordinately fond of money, and frequently jealous of control; but they are honest and faithful to their word, and with a little management their faults may be easily made to counteract each

other, by making it their interest to submit unconditionally to your orders.

They wear a dress peculiar to the class, which is rather picturesque, although their long pelisses must be almost as inconvenient in riding as in walking; the substitution of the red fez, however, for the huge kalpak which they formerly wore is a great improvement. The following description of Hussein Agha's dress, as he rode before me, will give some idea of their general appearance. His head was covered with a fez, the blue tassel of which was bound down by a dirty silk handkerchief; a faded green pelisse, open in front, and braided all over, descended to his heels, above which he wore another, much shorter, but braided in the same manner; while the long sleeves of his under vest of striped Damascus silk hung down several inches below the cuffs of his jacket; loose trousers of blue cloth covered his legs; while his feet were encased in red boots, drawn over the long embroidered felt stockings, the ends of which, being turned back over his boots, seemed to suggest the origin of the anomalous white tops of our hunting-boots: add to this a red silk sash, and the high cushion-saddle on which the Tatars always ride, and the reader may have some idea of Hussein Agha on horseback.

It was nearly half-past eleven on the 6th of July before I could leave the hospitable house of the consul, and, after winding through the lower town, issued by a gate near the sea, commanding a fine view of Cape Yoros and several other headlands to the N.W. After passing under the wall of the town, we turned suddenly to the west through the gardens, descending to the sea-shore a little short of the ruined church of Santa Sophia. For several miles to the west of Trebizond the ground rises gently from the sea, and is well cultivated, producing Indian corn and tobacco in abundance, as well as flax, melons, cucumbers, and beans.

Three miles from the town we crossed a small stream issuing from a wooded valley, and began ascending the low hills by a road overhanging the sea. The rocks, which here

rise abruptly from the water's edge, consist of a decomposing trap conglomerate, and are covered with low woods and a great variety of flowers. Those which now chiefly scented the air were the yellow broom, gum-cistus, myrtle, arbutus, bay, heath, wild vine, and other creepers; but the rhododendrons and azaleas were no longer in flower. Soon after one we reached the river Gera, which has formed a considerable delta at its mouth with the detritus brought down from the mountains, and we crossed it by a high bridge near a small village of the same name. The plain through which the river flows was highly cultivated, and the vegetation on the surrounding hills most luxuriant. The same character of country and of scenery continued until we reached the Calanoma Dere Sú, which we crossed by a stone bridge of two arches, like all in this country, most disproportionately high. The banks of the river were lined with luxuriant plane-trees; but the vegetation was very backward, and the barley only just beginning to be cut. At half-past two we descended to the gardens of Platana, where we saw the olive in great abundance. The low hills near the sea-shore consisted of a soft shelly limestone, containing many fragments and casts of recent or post-tertiary shells. After proceeding along the beach for half a mile we reached the town of Platana, the greater part of which is situated up a delightful and well-cultivated valley, abounding in fruit and olive-trees.

This town, which is said to contain 140 Greek and about 200 Turkish houses, is situated near the centre of an open bay which forms the winter anchorage of Trebizond, being less exposed to the N.W. gales than that roadstead. Having secured a konak in the café on the beach, I visited the old Greek church dedicated to St. Michael, and built, as the priest declared, above 800 years ago. Its style is certainly early Byzantine, and within are some curious old paintings on the screen before the altar, behind which four small marble columns rest on a low wall of the same material, and support a rude soffit. On the out-

side the windows and niches, several of which are false, are in rich Byzantine taste, decorated with several rows of an elegant beading or border. The priest was summoning his congregation to church on my arrival; and as the Greeks are not allowed the use of bells, they supply the want of them by a piece of wood suspended from a tree, which is struck like a drum by the priest, who at times endeavours to produce a kind of tune. The vine, the olive, and the fig grow here in great abundance, the vine being trained to the elms and mulberry-trees planted in the hedges round every small enclosure; large quantities of tobacco are also raised.

On the beach were several boats from Trebizond taking in lime, which is burnt in kilns near the spot where the shelly lime-stone, which appears to be of rare occurrence on this coast, is found. Platana has been supposed to stand near the site of Hermonassa, placed by Strabo* between Cerasus and Trebizond, and stated by Arrian† to be 85 stadia from Hieron Oros, which is nine geographical miles from Platana. It may also possibly be the representative of the Liviopolis of Pliny.‡

Thursday, July 7.—I left Platana soon after six, and, proceeding along the beach, passed several single houses, each with one or two boats drawn up before it; these boats are chiefly used for carrying wood to the different towns on the coast. A bank of myrtles generally intervenes between the road and the sea, whilst the ground rises gently on the left, the nearer hills being well cultivated, and the more distant mountains thickly wooded to their summits. The narrow path near the sea-shore had in many places been ploughed up by the peasants who owned the neighbouring land, which compelled us to have recourse to the sandy beach. At seven we passed a low promontory called Zeitoun Bouroun: the ruined piers of a bridge over the stream near it are of simple and primitive construction; a few stakes

* Lib. xii. c. 3, p. 548. † Peripl. p. 17.

‡ Nat. Hist. vi. 1.

driven into the ground, round which a wicker framework is woven, form a kind of coffer-dam, which is filled with large stones. As we advanced the scenery increased in beauty, and several bold and rocky promontories ran into the sea between us and Cape Yoros, while the hills, broken by a succession of wooded glens, and covered with rich vegetation and a great variety of shrubs, sloped rapidly to the blue sea below us. Amongst the causes of this luxuriant vegetation, in addition to the alternation of great heat and great moisture caused by frequent rain, I remarked the excellence of the soil, which was chiefly owing to the disintegration and decomposition of the igneous and trappean rocks. After passing round a point of imperfectly columnar basalt, we reached Akjah Kaléh at 8h. 25m., a ruined fort with a few wooden houses built on a rocky promontory, in attempting to gain possession of which some years ago the Russians are said to have met with considerable loss.

Akjah Kaléh is situated half-way between Platana and Cape Yoros, on the site of Cordyle, which, according to the anonymous Periplus, was a maritime station forty stadia from the Hieron Oros; it possesses a small open roadstead, called by the Turks a Liman or port, to the east of the promontory. The peasants along this part of the coast were all armed; each man carried a small carbine over his shoulder; but I met with neither rudeness nor want of hospitality, although they do not enjoy a high character for honesty. We have here another proof of the length of time during which customs will prevail in unfrequented districts, notwithstanding the change of government, laws, religion, and even of the people themselves. Xenophon* says that the Sanni and the Macrones, who inhabited this mountainous district, were a warlike and hostile race; this is confirmed by Arrian,† who states that, trusting to their fastnesses, they refused to submit to the Romans. In the present day the inhabitants of the coast, as far as Lazistan and the Phasis, are remarkable for their wild and predatory habits.

* Anab. lib. iv. c. 8-17. † Peripl. p. 11.

From Akjah Kaléh we descended to the shore, the coast here consisting of a succession of rocky headlands and intervening plains, protected by a reef of rocks which rises to the surface of the water about a mile from the shore. After passing Mersin, a single house upon the beach, with a boat drawn up before it, and crossing several small streams, we approached Cape Yoros, a mass of amygdaloïdal trap; the scenery increased in wildness and grandeur at every step, as the road passed through thick woods of fruit-trees, indigenous to the soil, as figs, cherries, mulberries, vines, chestnuts, pears, &c., while rhododendrons, azaleas, arbutus, and laurels, formed an impenetrable underwood, amidst which the fern grew most luxuriantly.

At half-past ten we reached Inji Liman, a little bay to the east of Cape Yoros; and a little further, a point called Kutchuk Mersin, on which were some remains of a ruined castle. At eleven we passed Cape Yoros, but I could perceive no traces of ruins of any kind on the point which forms the western extremity of the bay of Trebizond; the hill, however, presented a fine specimen of fan-shaped columnar basalt, the columns of which radiated with a slight curve from a common centre. Leaving Cape Yoros, we changed our direction from N.W. to S.W., and halted two miles farther for a meridian observation, which gave 41° 4′ N. lat.

Leaving this spot, we presently crossed the Iskefèh Dere Sú, flowing from a deep valley, in which many pointed hills covered with wood rise on each side. A broad plain extends from the mountains to the sea, in which the whole population of the district were employed in agricultural operations; beyond the coast consists of bluff trappean rocks, intersected in every direction by veins of calcareous spar, which gives them a honeycombed appearance. At one P.M. we passed a ruined castle called Gellita Kaléh, built on the brink of a ravine covered with rhododendrons and azaleas; and presently descended into another plain, watered by a large river formed by the junction of two

streams from different valleys, and covered with Indian corn wherever the ground was sufficiently level to admit of irrigation. This river, before entering the sea, makes a considerable bend to the east, in which direction it flows through the stony beach; I observed many instances of this peculiarity along the shores of the Black Sea, and in every case found the deflection was to the east, apparently caused by the prevalence of the N.W. wind, which throws up a bar or sand-bank along the beach, and turns the stream towards the east, where it at length escapes into the sea; the absence of tides in the Euxine greatly facilitates this process.

Leaving the plain we crossed a ridge of hills, where the luxuriant vegetation was increased by the swampy nature of the ground, which was covered with rhododendrons, azaleas, oak, laurel, arbutus, heath, myrtle, and gum-cistus. Agues and fevers are said to be very prevalent. A mile farther we reached another river, called the Kerasoun Dere Sú, which has escaped the notice of geographers, though it marks the site of the Cerasus of Xenophon, placed by the anonymous geographer on a river of the same name between Hieron Oros and Coralla, 90 stadia from the former and 60 from the latter. The distance from Cape Yoros to this river is about 8 miles, and Dr. Cramer has justly observed,* that Kerasunt, which is universally recognised as Pharnacia, although considered by Arrian and others to have been the same as the Cerasus of Xenophon, was at too great a distance from Trebizond for an army to have reached it in three days over a hilly and mountainous country. Considering the distance and the difficult nature of the ground, over a great part of which the army must have marched in single file, Xenophon and his 10,000 men would hardly have arrived there in ten days. Cramer's conjecture that the Cerasus of Xenophon was not far from the Skefié of modern charts is also well founded, the Kerasoun Dere Sú being about five miles to the west of the river of Iskeféh, and almost half-

* Asia Minor, vol. i. p. 281.

way between Cape Yoros and Cape Kereli, the ancient Coralla. I did not, however, observe any vestiges of ruins near the river, although, as my search was not very minute, they may exist higher up the valley. The low flat grounds between the mountains and the sea produce rice as well as Indian corn, and many fields were completely under water.

At a quarter after two, near the village of Fol, we passed the konak of Mehmet Agha, an independent proprietor and lord of the neighbouring country: many of these chieftains still exist along the coast, and a certain degree of authority is generally granted to them by the pachas of the district, though not to the same extent as they possessed when their influence as Dere Beys remained untouched. A mile farther we reached a row of modern buildings, mostly deserted, called Kertch Khana, which signifies a factory, or house for carrying on any kind of manufacture; and at three we reached Buyuk Liman, consisting of a large straggling house, with a bazaar attached to it, situated close to the sandy shore, which has been formed by the gradual deposit and union of various deltas, composed of the materials brought down by streams from the surrounding hills. Here also fevers and agues were already prevalent, and most of the inhabitants had retired to their yaïlas for the summer.

Friday, July 8.—I started before six, in hopes of reaching Tireboli (ten hours distant) the same day, and soon ascended the low terraces which rise at a little distance from the sea. After crossing the Aksa Dere Sú by a wooden bridge covered over in the same manner as those of Switzerland, we quitted the sea-shore, passing over undulating and wooded grounds, with the konak of another chief, called Uzun Oglu, on the right, and hills covered with alders and vines on the left. Half a mile farther we passed Cape Kaléhjik, so called from a ruined castle, the age of which I could not determine. Here the road led through an extensive enclosure, surrounded by a stout fence and protected by gates which crossed the path, a most unusual occurrence.

The same wild and picturesque scenery continued for many miles; the wooded hills, intersected by numerous ravines, were covered with the richest vegetation, in which tall trees and luxuriant shrubs vied with each other and formed an agreeable contrast, while the blue and tranquil sea beneath was occasionally visible through their branches. In the midst of this delightful scenery the road was suddenly reduced to a narrow path scarcely a foot in width, along the top of a causeway on the side of the hill, which sloped rapidly to the sea, several hundred feet below. It was impossible to continue on horseback on such a wall, concealed too as it was in part by the vegetation which grew over it; and my example of dismounting was soon followed by the rest of the party.

Soon after seven Cape Kereli was below us, with the remains of an old castle, called Kereli Kaléh, and a few other ruined buildings; they were evidently Turkish, yet I regretted the almost total impossibility of descending the hill, to have searched for some traces of the ancient Coralla, which the modern name sufficiently proves once stood upon this spot. After crossing the Aïyenesin Dere Sú, flowing through a highly cultivated plain, we entered a repetition of the same wooded scenery, superior if possible to any I had yet seen. One glen in particular was most striking, consisting of a narrow grassy glade, opening to the sea and fringed with azaleas and ferns, above which the rocky sides were overgrown with trees, whose boughs nearly reached across, while higher up the glen the steep banks gradually met, forming a dark ravine filled with every shrub that could grow on this favoured coast.

Before nine we again descended to the sea-shore by a narrow path, or staircase cut in the rocks, and, having crossed the Chaousli Dere Sú, we continued along the beach, passing many gardens and cottages, with cypress-trees and olives close to the water's edge. As we approached Eleheu we met many parties of peasants, amongst whom the men were all armed, on their way thither, to attend either the market or

the mosque, Friday being the weekly holiday, or day of rest, with the Mahometans. The low cliffs along the coast consisted of a black volcanic breccia, containing large fragments of trap, the decomposition of which has produced a fine loamy soil. The small streams which here fall into the sea, being unable to force their way through the shingly beach, form a kind of backwater, from which the water oozes through the stones, which at the same time serve as bridges to cross the streams.

We reached Eleheu at half-past ten, and found a busy scene, enlivened by peasants collected under the trees, smoking and resting, or making bargains. I halted at a spot where the young Agha was sitting in state within a railed space under some mulberry-trees, where, while waiting for horses, I smoked a pipe with him and feasted on delicious Cerasian cherries, a fruit indigenous to the coast, whence it is said to have been introduced into Italy by Lucullus.* The Agha, although generally pompous and very ignorant, was extremely courteous to me; he wore a dress of white calico of huge dimensions, and a turban of preposterous size, which covered both sides of his face and neck; in manner he affected great abruptness and quickness, very different from the sedate gravity of the Turks of the old school, and was violent and imperious towards the people. I had a striking instance of this when a poor man came forward to kiss his hand, and to beg that his horse might not be pressed into my service; he suddenly drew back his body with offensive pride, thrust his hands under his chair, and appearing as if afraid of being contaminated, dismissed the old man with a volley of abuse and oaths. This young man was nephew to Chiaya Bey of Trebizond, who had formerly been governor of Tireboli, where he was a Dere Bey, and the great feudal proprietor of the neighbourhood; although he has now lost all his feudal rights, he is much looked up to by the Pacha of Trebizond, who consults him on all measures respecting this

* Ammian. Marc. xxii. 13.

part of the country, and entrusts him with the command of a considerable district.

When the Agha retired to the mosque at noon for his mid-day devotions, I took a meridian observation, to the great amusement of the Turks, who stood around me, but without offering the slightest interruption. My interpreter explained to them, that I was looking at the sun to ascertain the exact moment of noon, which appeared to them a very reasonable proceeding. The village of Eleheu is situated in a fertile plain, two miles in length and half a mile in width, between the sea and the wooded hills, and has been supposed to stand upon the site of Philocalea, mentioned by Pliny* as 90 stadia to the east of Argyria. I am, however, more disposed to think that Philocalea was near the promontory of Kara Bouroun, where a large river falls into the sea.

We started soon after twelve, crossing the Eleheu Dere Sú flowing through the plain, and two miles farther the Kara Bouroun Chai—a large river issuing from a wooded valley. The course of all these rivers, from their sources to the sea, must necessarily, owing to the geographical structure of the country, be extremely short; I was therefore surprised at the large body of water which many of them contained. The hills were covered with natural woods of mulberry and cherry trees; and although the same beautiful scenery continued over several successive ridges and intervening plains, we experienced much delay and inconvenience from the difficulty of getting the baggage horses through several narrow passes, particularly at one place which the Tatar had already warned me of, and brought forward as a reason for performing this part of the journey by sea.

Soon after two we had a fine view of the bold headland of Kara Bouroun about a mile off, with high rocks rising through the trees, and verdure which clothed its sides down to the water's edge; and we presently passed a few insulated rocks near the beach, on one of which were some

* Nat. Hist., lib. vi. 4.

ruins called Goolak Kilisséh, or Goolak Kaléh. We then crossed in succession two considerable streams, called the Baba Dere Sú and the Bazar Chai; between these are a few small rice-fields, which being then flooded resembled stagnant ponds or marshes overgrown with weeds and grass. Beyond the Bazar Chai we entered another plain formed by the detritus brought down by the Tireboli Sú, which flows through its western portion. This river, rising in the mountains of Armenia above Gümischkhana, and receiving many tributaries from those lofty hills, was so deep and rapid that we could only cross it by means of a ferry-boat, which delayed us some time, as we had to wait for the ferryman, and it required four trips before all the horses could be carried over.

The view of the valley presented much wild and picturesque scenery; many rocky pinnacles rose from its wooded sides, and a succession of mountain-chains was visible one above the other far into the interior. After quitting the ferry we ascended the hills to the N.W., and at half-past four reached the summit of the ridge, consisting of stratified beds of coloured marls and sands; and thence crossed a succession of ridges, through scenery of great beauty, amidst which the town of Tireboli embosomed in wooded hills overhanging the sea was conspicuous. At length, after passing through groves of filberts and over green trap rocks, where I picked up some good specimens of chalcedony, we descended by a winding and rocky road to the sandy beach of a little bay situated on the east side of the town.

On reaching the summit of the hill I found myself obliged to accept the hospitable invitation of the governor, and to take up my quarters in his konak. He told me that the road to Kerasunt was so extremely bad, and so utterly impassable for the baggage-horses, that it was far more advisable to go by sea, which, with a favourable wind, would be an affair of only three or four hours instead of twelve. I therefore determined to follow his advice, as

there was no place of particular interest to be seen along the coast except Cape Zefréh or Zephyrium, and near which the road would not pass. The evening was spent, as is too often the case in a Turkish house, in gratifying the curiosity and answering the questions of the host, the multitude of attendants and constant presence of the master destroying all attempt at privacy or rest. During supper, which was served in the room allotted to me, the governor came, accompanied by twenty or thirty attendants, who waited with the most perfect order and silence: each man having his own appointed task, there was neither bustle nor confusion. As a Turk of rank and wealth scarcely ever leaves his seat during the day, but has everything brought to him where he sits reclining in the corner of his sofa, his servants soon become perfect in their parts. Does he wish to perform his ablutions, all the necessary washing apparatus is brought to him, one man carrying a basin, another a ewer, a third an embroidered napkin, &c.; does he wish to write, his writing materials are brought to him; does he wish to eat, the table is brought to him while still sitting in the same place: and thus he gets through the day without exertion—a perfect model of voluptuous idleness.

The Governor's house was well furnished, consisting of a large corps de logis, in front of which ran a wooden gallery, with a spacious and well-carpeted apartment at each end, one of which was for his private use, the other his reception room, Divan Khanéh or Salamlik, while the centre and gallery were appropriated to servants and offices. The following description of my room will show how those in the better class of Turkish houses are fitted up:—entering the apartment from the west is a passage, lower by six inches than the room itself, from which it is separated by a wooden balustrade and painted architrave supported by wooden pillars. In this outer passage are cupboards and recesses for stores, bottles, glasses, and hookahs. Here, too, the attendants leave their

shoes and slippers before they venture to enter the upper room, which is covered with rich carpets, and surrounded, except at the east end, where is the fireplace, by low sofas, with soft cushions placed against the wall. On each side of the room are two rows of windows, of which the lower have no glass, but are merely closed with wooden shutters, while the upper windows, not intended to be opened, are made of painted glass. The wall itself for about five feet above the cushions consisted of *parquet* of alternate black and white squares, above which it was painted white with arabesque patterns; the ceiling also consisted of elegant patterns of inlaid *parquet*, with paintings in arabesque on a white ground.

Saturday, July 9.—I awoke early to a heavy rain and fog, driven across the Euxine from the steppes of Russia by a strong north-wester; and after waiting some time for the boat, I proceeded, in company with the Agha's saraff or banker, to visit the old castle at the extremity of the rock on which the konak is situated; this rock forms one of three distinct rocky headlands, on which the town of Tripolis or Tireboli is placed, with three intervening bays or harbours, and from which the ancient town probably derived its name. In these bays there is very deep water; but as they also contain many sunken rocks, the anchorage is not safe. The castle itself was much ruined, with some rudely carved stones over the gateway; a small battery of four guns has lately been erected here for the defence of the town, but the embrasures are so placed that two of the guns can only be brought to bear upon the town itself. On the summit of the rock are the remains of a small Byzantine church. The ruins of another castle and walls of considerable age exist on one of the other headlands, but no remains of Hellenic times are anywhere to be seen. The population of Tripolis is said to occupy 400 Turkish and 100 Greek houses; the town contains a bath, four mosques, and a Greek church. Tournefort* was mistaken in describing

* Lettres, &c., vol. iii. p. 65.

it under the name of Kerasunt, and in giving that name to a view which really is that of Tripolis, and to which his description of Kerasunt, as he calls it, exactly applies.

At half-past one P.M. the boat was not yet ready; and I at length discovered, after repeated inquiries, that the boatmen were afraid of putting to sea with the wind and rain against them; and I was obliged to make up my mind to remain here all day. I accordingly started to visit the entrance of an old mine, said to exist near the mouth of the Tireboli Sú, which had been abandoned in consequence of the water having got in. I was also told that there were ruins on a low hill opposite the mines on the other side of the river; but on arriving there found nothing but a few heaps of stones near the top, which, from their burnt appearance, were probably the ruins of works connected with the mines. The situation, however, was very commanding, and the view up the river very striking. About ten miles off I saw on the summit of a lofty hill a remarkable-looking rock, which my guide called, in a strange mixture of languages, Petra Kaléh, or rock-castle, the rooms and apartments of which were all said to be cut out of the solid rock. The hill on which I stood appeared, from the identity of its formation, to have been once continuous with those on the opposite side, when the river must have flowed in another channel more to the east, a supposition fully confirmed by the general appearance of the country, and by the local traditions which were subsequently reported to me.

As I returned by the ferry a heavy shower compelled me to take refuge in the ferryman's hut, made of rough boughs and sticks, where I was amused with a scene between the owner and some peasants who were anxious to cross the river. The hut was so small that they were obliged to remain outside; and the heavier the rain fell, the more eager they were to proceed, while the old ferryman, who had refused to stir until the rain was over, became more obstinate

and immoveable. From the ferry I proceeded along the left or west bank of the river to the mines I was in search of, the entrances to which were almost choked up with rocks, or overgrown with a rank vegetation. I now learnt, to my surprise, that they had been silver-mines, and very productive, not copper as I had supposed. It immediately occurred to me that this must be the Argyria of the ancients, placed by Arrian * and the anonymous Periplus twenty stadia to the E. of Tripolis; the distance from Tireboli being two miles and a half. In Cramer's map, Argyria is placed too far to the east, in consequence of Tripolis being erroneously placed at the mouth of the river. The only other place in this country where silver is known to be found are the argentiferous lead-mines of Gümischkhana; therefore, when Homer says

Τηλόθεν ἐξ Ἀλύβης, ὅθεν Ἀργύρου ἐστὶ γενέθλη,†

he probably alludes to this very spot, and Strabo and Scylax were equally correct in supposing Ἀλύβης to be merely a corruption from Χαλύβης.

The ore occurs in a white felspathic rock in a state of decomposition, and chiefly near the junction of the marls and the igneous rocks; I had already observed that the variegated marls and clays became harder in the lower beds, until they were at last altered to white and red jasper. The mines appeared to have been neglected for many years; my guide assured me they had not been opened for thirty years; but he added that they had not been worked since the river ran in its present course, saying that it formerly flowed to the east of the hill above mentioned, and that since its course had been changed the mines had been filled with water. The Agha afterwards confirmed the report that these mines were rich in silver, observing that as they descended, the silver became scarce, and copper more abundant. The only mines now worked in this neighbourhood were said to be six hours to the S. of Eleheu, pro-

* Perip. p. 17. † Il. B. 857.

ducing much copper, and employing between 600 and 700 men; he added that the ore was very rich and easily worked, being near the surface. He also told me that there were iron-mines 20 hours to the W. of Tireboli; but he could not specify their exact position.

CHAPTER XVI.

Voyage from Tireboli to Kerasunt—Cape Zephyrium—Insula Philyreis—Kerasunt Ada, anc. Insula Aretias—Reach Kerasunt—Hellenic walls—Ancient Pharnacia—Road to Ordou—Bazaar Sú, anc. Pharmatenus—Melet Irmak, anc. Melanthius—Ordou, anc. Cotyora—Voyage from Ordou to Fatsáh—Cape Vona, anc. Boona—Cilicum Insula—Yasoun Boroun, anc. Jasonium Promontorium—Fatsáh, anc. Phadisana—Polemonium—Hayar Kaléh—Uniéh, anc. Ænoe—Uniéh Kaléh—Iron-mines and forges—Ancient Chalybes.

SUNDAY, July 10.—The luxuries of the Agha's hospitality were not to be enjoyed for nothing, and a bakshish of 200 piastres was expected, and almost demanded, by his needy followers; however I got off for half that sum, and after taking leave of the Governor entered my flat-bottomed Argo-looking boat soon after seven. Like their classic predecessors, the boatmen kept close in shore, and from fear of deep water followed all the sinuosities of the land amidst rocks and breakers. However, as the swell went down, they took courage and stood across the bay for Cape Zefréh; the coast appeared well wooded, and the scenery of the same description as that between Trebizond and Tireboli. Before rounding Cape Zefréh we passed a small harbour to the east of the point called Kaïk Liman, which must be the harbour of Zephyrium, mentioned by Scylax,* and which the surveys place at 90 stadia from Tripolis.† From Cape Zefréh we stretched across another bay to Kerasunt, bearing W. ½ S.

About two miles farther we passed outside a rocky islet, probably the Philyreis Insula of the ancients, and which the Argonauts passed soon after leaving the island of Aretias.‡ The Philyreis is placed by Apollonius Rhodius§ to the east of the Mosynœci, and we saw no other island, the position of which would have agreed with that of Phi-

* Scy., p. 33. † Cram. As. Min., vol. i. p. 282.
‡ Apoll. Rh. Arg., ii. 1235. § Ib. 394.

lyreis. Captain Gautier is decidedly wrong in putting down on his chart two islands near Tireboli, as nothing but very small rocks are to be seen in that neighbourhood. Soon after three we landed on an island between nine and ten miles from Cape Zefréh, and called by the Turks Kerasunt Ada. This is evidently the Insula Aretias, mentioned by Apollonius Rhodius as celebrated for a temple of Mars, said to have been erected by two Amazonian Queens, Otrere and Antiope.* It is between three and four miles from Kerasunt, which agrees with the 30 stadia of Arrian.†

The rock is a black volcanic breccia, with imbedded fragments of trap, and is covered in many places with broken oyster-shells, brought by gulls and sea-birds, to which Apollonius alludes when he makes the Argonauts expel the μέγ' ἀνιδέας Οἰώνους. It is overgrown with weeds and brambles, which almost conceal the remains of the surrounding wall. A large tower with embrasures and windows stands near its southern extremity, but showing no traces of Hellenic origin.

The town of Kerasunt, which represents the Pharnacia of antiquity, and which we reached soon after four, is situated on the extremity of a rocky promontory connected with the main by a low wooded isthmus of a pleasing and picturesque appearance. The highest point is crowned with the ruins of a Byzantine fortress, from which a strong wall, with Hellenic foundations, stretches down to the sea on both sides. After establishing myself in some empty rooms over the café, I strolled out to explore the remains of which I had obtained a glimpse; but it being late, and having no guide, I deferred their examination until the following day.

Great uncertainty prevailed even in former days respecting the early name of this place; for, though all writers speak of it under the name of Pharnacia, Arrian states that it was originally called Cerasus,‡ evidently confounding it

* Apoll. Rh. Arg., ii. 384. † Peripl. p. 17. ‡ Ib.

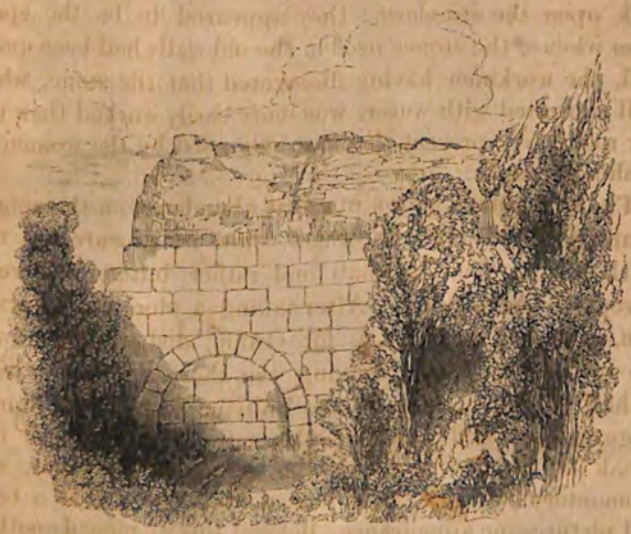
with the town near which Xenophon and the ten thousand halted on their march from Trebizond. I have already shown where the Cerasus of Xenophon really was; but it is curious that the same error should have prevailed in modern times, and that the name erroneously given to it by Arrian should really have been applied to it in the present day, to the entire exclusion of its ancient name of Pharnacia. It is said to have been founded by the Sinopians, to whose city it bears considerable resemblance, while according to other accounts it was first settled by Pharnaces, grandfather of Mithridates Eupator, under whom it became notorious as the scene of a most tragic event, having been the spot to which that king sent the eunuch Bacchides, to put to death his wives and sisters, amongst whom were Roxana, Statira, Monime, and Bernice, to prevent their falling into the hands of Lucullus.* Strabo says that it was chiefly built by the Chalybes, subsequently called Chaldæans, whose country he extends to the eastward of Trebizond.

Monday, July 11.—Under the guidance of a chavasse I examined the Hellenic walls, which are constructed in the best isodomous style. Commencing near the beach on the west, they continue in an easterly direction over the hill, forming the limits of the present town. Near the gateway they are upwards of 20 feet high, and form the foundation of the Agha's konak; a small mosque has also been raised upon the ruins of a square tower; the blocks of stone, a dark green volcanic breccia, are of gigantic size. Near the crest of the hill, where the wall runs N.N.E. for some distance, are the ruins of a more modern castle, attributed to the Genoese or Byzantines, and called the Utch Kaléh; and on one of the angles of the wall is a small wooden fort with loopholes for musketry, said to have been erected by a powerful Dere Bey, who held possession of the place. To the east also the ancient walls may be traced almost the whole way from the castle to the sea, where

* Plut. in Vit. Lucull.

I observed an arched Hellenic gateway blocked up with masonry of the same style, as shown in the accompanying woodcut; beyond which was a high tower overgrown with ivy.

No. 8.



[*Walls of Pharnacia.*]

Having reached the shore, I returned by the beach, where the walls were entirely Byzantine, and where are the ruins of a small Byzantine church, built of well-hewn square stones, cemented together with mortar, with considerable remains of painting on the inside. These walls were very perfect on the west side, and passing through them by a postern gate I descended to the ruins of another church near the beach, where is a small harbour, fit only for very small vessels. Here was a double line of walls, the defences having been made stronger on this side, partly to defend the neighbouring port, and partly because, from the depth of water, it was the only spot where an enemy's vessel could approach the shore in safety. Between these walls we entered a large and dark apartment; from whence,

after procuring a light, we descended by secret steps to the beach. Here the rock had been cut away, presenting a perpendicular face, up which another flight of steps led back to the Agha's konak. In walking round the town I had observed many large square troughs cut in the solid rock upon the sea-shore; they appeared to be the spots from whence the stones used in the old walls had been quarried, the workmen having discovered that the stone, when well saturated with water, was more easily worked than the dry rock. At present they are only used by the women as washing-troughs.

The wild cherry grows in great abundance on the neighbouring heights, and no others could be procured in the market; the fruit is small and rather bitter, but well-flavoured, and not acid. After taking a meridian observation, I started at two P.M. for Ordou, distant 12 hours—the road scarcely ever leaving the shore the whole way. In half an hour we crossed the Baltema Sú, flowing from a large and wooded valley; and a mile farther passed the konak of Suleïm Mehmet, the Agha of Kerasunt, the promontory of which, as I looked back, presented a bold and picturesque appearance. Beyond this we passed another promontory called Aïvasil, which is probably a corruption for Aigios Basilios (St. Basil); the scenery was of the same striking character as that which we had enjoyed since leaving Trebizond, the hills and valleys equally well wooded, and many fields of rice covering the low grounds. At five we reached a village called Boulanjak, where we were to have halted for the night, but the inhabitants had abandoned it in consequence of the fevers, which are very prevalent, and had retired to their Yaïla in the mountains; so we were obliged to go on two hours farther. Even the single houses on the hill-side were deserted, and, as Hussein observed, were all bosh! (nothing). Farther on we entered a wood of dwarf pollarded sycamores and other trees, which extended to the plain, watered by the Bazaar Sú, enjoying a delightful ride under their shade, and cheered

by the song of their feathered tenants. On reaching the plain, nine-tenths of it appeared to be planted with Indian corn. Most of the fields were enclosed, either by hedges or by neat and strong palisades, formed of small boughs twisted between stakes placed in the ground about a foot apart. Here we forded the Bazaar Sú, a river of considerable size, which appears to be the Pharmatenus of Arrian, or the Pharmantus of the anonymous geographer, 120 stadia from Pharnacia: on the map the distance is about 13 miles. Near the banks of the river the ground is not well cultivated, being subject to frequent inundations, and covered with sand and gravel; but plane-trees and sycamores are numerous, and thrive luxuriantly both there and on the hills above.

Leaving the plain we again passed through thick and varied woods, where the oak and the hornbeam mingled their branches with those of azaleas and rhododendrons, the whole brilliantly lighted up by the rays of the setting sun. We reached the café of Aptar soon after sunset, where I collected on the beach some fine specimens of agates and cornelians. These are found in great abundance on parts of the coast between Trebizond and Constantinople, washed out of the trap-rocks in which they are originally formed.

Tuesday, July 12.—Leaving Aptar soon after six, we crossed a small stream, and rode for several miles along the coast, passing a few rice-fields dotted with black mulberry trees; this is not, however, the same tree as that of Europe, the fruit being of a pale colour inside, and as insipid as the white variety. The country, as we advanced, became less hilly and more cultivated; and at 8 h. 30 m. we forded the Dourma Sú, flowing through an alluvial and highly productive plain. At nine we were crossing another level tract, on which many herds of cattle were grazing; while the pools were filled with buffaloes, cooling their rugged sides by wallowing in the mud. I have often fancied, while watching these uncouth animals, that a naturalist might almost view them as an intermediate genus between the Bos and the Pachy-

dermata. The shrill sound which they utter resembles the grunt of a pig rather than the deep-toned lowing of the ox.

As we advanced over the plain the hills on our left receded, and at half-past nine we forded another considerable river, called the Melet Irmak, probably the Melanthius of the ancients; and which, in the days of Xenophon, separated the territories of the Tibareni and the Mosynœci. After crossing another small and winding stream we reached the rope-walk of Ordou at half-past ten. Several fine boats called scampavias, belonging to the government or Aghas along the coast, were lying on the beach; they are manned by 12 or 14 men. In consequence of the want of horses I was unable to proceed to Fatsáh to-day; the distance is 12 hours without any halting-place; the whole journey must therefore be performed in one day; and this can only be effected by starting very early.

In hopes of discovering some traces of the ancient Cotyora, where the ten thousand halted for 48 days before they embarked for Heraclea, I visited a ruined castle on the sea-shore, a few miles to the north, called Búzúk Kaléh, and built on a rocky peninsula of columnar basalt; it was, however, decidedly Turkish or Byzantine, and bore from Cape Vona S.S.E. about nine miles. Cotyora perhaps stood on the site of Ordou, where some remains of an ancient port, cut out of the solid rock, are still visible. The decline of the town commenced at a very early period, for we know that in Arrian's time* it was little more than a village, and Strabo† says that its inhabitants were removed to Pharnacia. On my return I obtained some good medals, amongst which were several autonomous coins of Pharnacia, Cabira, Neocæsarea, Amisus, and Amastris. The town contains 120 Greek and 100 Armenian houses; the Turks, as in many places along the coast, where they are the principal if not sole proprietors of the soil, live in single houses or small hamlets on the hills. In fact, the manners of these Turks closely resemble those of their predecessors in the time of

* Arr. Peripl., p. 17. † Lib. xii. p. 548.

Xenophon, who describes them as dwelling in detached and insulated huts throughout the country. He also calls them barbarous and quarrelsome; and it is only within a few years that the feuds and disputes of neighbouring districts have been put down by the energetic interference of the government.

Wednesday, July 13.—As I was anxious to visit Cape Yasoun or Jasonium, on which ruins were said to exist, I gave up the mountain road and took advantage of a scampavia belonging to Osman Pacha, which was going to Unieh, and proceeded to Fatsáh by water. The reis, or captain, agreed to take me with my baggage and servants for 100 piastres; the distance by land being twelve hours, and the usual hire of boats being at the rate of a piastre per hour for each horse which the party would require on shore. Macdonald Kinneir succeeded in crossing these mountains, which separate the territory of the Tibareni from that of the Chalybes; the highest range terminates in Cape Jasonium, and probably forms the barrier alluded to by Hecatomnus, in the speech quoted by Xenophon,* as forming the boundary of Paphlagonia, beyond which were the plains of the Thermodon and the Iris; for he says that, even if the Greeks succeeded in forcing this difficult mountain-pass, they would still have to cross the Thermodon, the Iris, and the Halys, from which it is evident that the limits of Paphlagonia were to the east of those rivers. Xenophon had also said just before, that the Greeks in foraging procured some of their provisions from Paphlagonia, and the rest from the country of the Cotyorans.

I embarked at half-past six, and in half an hour passed Búzúk Kaléh, beyond which the coast trends away to the west, forming the bay of Pershembah, in which many Turkish houses were scattered amidst the woods and on the beach. Some writers have supposed that Cotyora was situated in this bay, which is certainly more sheltered than Ordou, and its distance from the river Melanthius agrees better with the

* Anab. v. c. 5.

sixty stadia of Arrian, and the anonymous Periplus, than the site of Ordou. Farther to the N.W. was the port of Vona, by the Turks called Vona Liman; it is considered the best winter harbour on this side of Constantinople, preferable even to that of Sinope, on account of the greater depth of water. Here we put in soon after nine, under pretence of procuring water, which the reis declared was the best along the coast; but his real motive was to get some refreshment. The beach where we landed consisted of a causeway or pavement of basaltic columns sloping towards the sea. Sailing from thence we passed a small fort, built on a projecting rock of basalt, from which the Turks boast of having fired at a Russian vessel, and carried away her bowsprit. Soon after ten we rounded Cape Vona, also called Cham Bournou (Fir Cape), and altered our course to N.W., being gently propelled by an agreeable breeze from the east.

Beyond Cape Vona the coast is steep and thickly wooded, and perfectly uninhabited; near it I observed a small island with a ruined fort called Hoïrat Kaléh. This must be the Cilicum Insula placed by the maritime surveys at fifteen stadia from Cape Yasoun, and which has hitherto escaped the notice of geographers. I was here obliged to interpose what authority I could exert to prevent the commission of an act of cruelty on the part of the captain, who was going to leave on this desert coast one of his men, who had already received much hard usage for idleness and misbehaviour. No doubt the man richly deserved some severe punishment, but here he would have perished from want before he could have procured assistance. The freshening breeze soon brought us to Cape Yasoun, where we were nearly wrecked on the sunken rocks, before the reis attempted to shorten sail. Here I landed for a short time to take a meridian observation, which gave the latitude 41° 7′ 30″, but found no ancient ruins: one large building was pointed out, which the sailors called a monastir, but it was evidently the ruin of a Greek church, to which

some small adjoining buildings appeared to have been once attached.

Leaving the Cape, the coast seemed well cultivated, and the valleys thickly wooded: we landed on the beach of Fatsáh at half-past two, close to a small fort near the Agha's konak; the village itself contained about 40 houses. A large ship-of-war on the stocks near the fort was being built by Osman Pacha for the Sultan: the labour is all forced, the workmen, both Greeks and Turks, to the number of 300, receiving only six paras a day, about threepence three farthings of our money; while the country people are obliged to supply the timber from the forests without remuneration.

The mouth of the Pouleman Chai, formed by the junction of two rivers from different valleys, is about a mile and a half to the east of Fatsáh; it was formerly called Sidenus; and near its mouth once stood the town of Polemonium. The ruins of an octagon church, dedicated to St. Constantine, and the remains of a massive wall to the south of it, are probably the only evidence of its former site, although the little village of Pouleman is on the other side of the river towards the east. It is not unlikely, as Mannert supposes,* that Polemonium may have usurped the name and situation of Side, since the former name is not mentioned by Strabo, nor the latter by any writer subsequent to him. Its distance from Fatsáh, evidently the Phadisana of Arrian and the anonymous Periplus, agrees with the ten stadia given as the distance between the two places. Fatsáh is now the scala or seaport of Niksar (Neocæsarea), to which there is a difficult road over the mountains, through thick and luxuriant woods, the distance being eighteen hours.

Thursday, July 14.—An hour's ride along the coast brought me to Hayar Kaléh, six or seven miles east of Fatsáh, a konak belonging to Ali Bey, where I expected to find some interesting ruins. It is only a Genoese castle, built on a rock which projects into the sea, having a small snug

* Geogr., tom. vi. p. 439.

harbour to the east, and wooded hills rising immediately behind it. I was afterwards informed at Sinope that there were some ruins in a neighbouring valley. Returning to Fatsáh, I discovered an ancient tomb excavated in the side of the hill with many niches inside, like those of Suleïmanli or Blaundus.

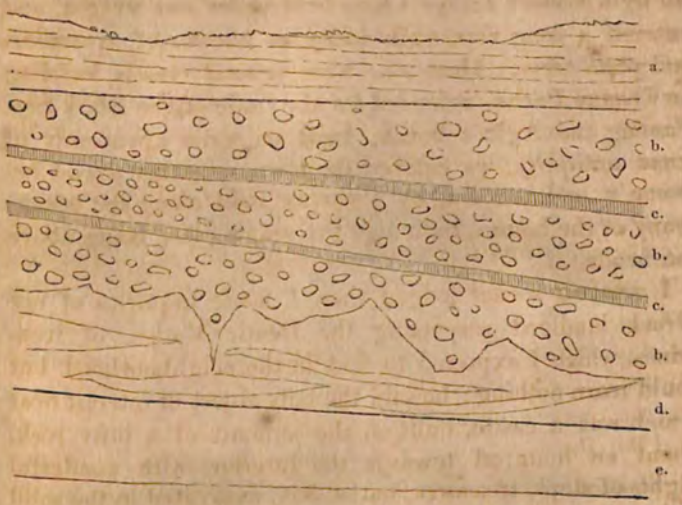
Since rounding Cape Jasonium I had entered the country of the Chalybes, and my attention was alive to the discovery of the iron-mines for which they were so much celebrated. Although I could obtain no information respecting them, I was struck with the remarkable change in the geological structure of the country: the volcanic and trappean rocks, which had so much prevailed almost all the way from Trebizond, had entirely disappeared, and the hills of Hayar Kaléh consisted of white chalky limestone, interstratified with beds of a soft calcareous grit, dipping to the west at an angle of 20°.

I left Fatsáh at ten A.M., for Uniéh, distant six hours; and, after passing the fort, forded the Electchi Sú. The wooded hills on the left were covered with medlar, pear, apple, and plum-trees, all growing wild, and mingled with the bays, azaleas, and rhododendrons. After fording another river in a low and wooded plain, we again reached the shore, where I picked up some beautiful pebbles of jasper and agate. Farther on the low cliffs on the left consisted of alternating beds of red and white limestone, overlying that of Hayar Kaléh, above which was another alluvial bed containing numerous boulders. These cliffs are interrupted by a plain watered by the Cherivi Dere Sú, probably the ancient Phigamus, placed by the maritime surveys at forty stadia from Œnöe, and on the map six or seven miles from the town of Uniéh.

A mile farther the white limestone was quarried and burnt for lime; beyond which the low cliff afforded an excellent section of this formation, as shown in the accompanying diagram. The red and white chalk is overlaid by a conglomerate of marl containing angular fragments of

jasper, and separated by several continuous bands of striped and wavy jasper, many large blocks of which are

No. 9.



a. *Diluvium and stratified gravel.*
b. *Conglomerate and pebbles.*
c. *Bands of veined jasper.*
d. *Variegated red and white chalky marl.*
e. *Thick-bedded white cretaceous limestone.*

also lying on the beach. Ancient writers, in speaking of the wealth and riches of Mithridates, describe his cups of onyx, and vases of jasper,* &c.: here might be found many blocks of sufficient size, and capable of receiving the most beautiful polish, to gratify the tastes and vanity of this extraordinary personage.

Soon after two P. M. we entered a rich and extensive plain, watered by the Jevis Dere Sú, which we were compelled to ford, and then retrace our steps to the sea-shore. This river is three miles from Unieh, and may have a better claim to be considered the Phigamus of the ancients than the Cherivi Dere Sú. As we approached the town, many heaps of red and white limestone slabs were lying on the

* App. Mithr., c. 115. Strabo, lib. xii. p. 556. Plut. Pomp., c. 36, 37.

beach ready for exportation. Some are conveyed to Kerasunt, and used for paving-stones and other domestic purposes. At a quarter before three we crossed the Uniéh Sú by a wooden bridge which bent under our weight, and entered a long rope-walk under an avenue of sycamores and plane-trees. Here also were several vessels building for Osman Pacha, intended for the trade of the Black Sea. Passing the Agha's konak, built on walls apparently of great antiquity, we entered the town, or rather passed between it and the sea, by a narrow road along the beach; many of the houses, built over the sea on piles, being above our heads.

I was no sooner lodged than I made inquiries of my Greek landlord respecting the Demir Maden, or iron-mines, which I expected to find in the neighbourhood, but could learn nothing; he said the only object of interest near Uniéh was a castle, built on the summit of a lofty rock, about an hour off towards the interior, with wonderful flights of steps, treasures, baths, &c., excavated in the solid rock. I was anxious to see what had given rise to such a description, and accordingly at once put myself under the guidance of two Greek boys, and reached the foot of the castle-hill, after a walk of nearly an hour and a half up the valley of the Uniéh Sú. The road at first led through a rich country producing corn and flax; the latter, grown chiefly for the sake of the seed, was now ripe; Osman Pacha is obliged to send a certain quantity of it to Constantinople every year. Presently the road passed through a wild and beautifully wooded country. The castle is situated on the summit of a lofty and almost perpendicular rock, surrounded by deep glens and wooded hills, with here and there a grassy glade, above which it rises to the height of nearly 500 feet; to the south it joins the hills by a neck of land on which is a small Turkish village called Kaléh Kieui; yet even here the rock rises perpendicularly 200 feet, presenting to the view a tetrastyle temple cut in it half way up the smooth face of the precipitous cliff, through

which an opening leads into a small cave, where, according to tradition, a hermit formerly dwelt. It is now inaccessible; no ladder could ever reach it; and a narrow path scooped out of the face of the rock is almost obliterated. On each side of the temple are several paintings (ζωγραφήματα, as my host called them), apparently of Greek saints. The upper portion of the hill was so precipitous all round, that my guides in vain endeavoured to find a way to the top. Near the summit, however, I found a remarkable passage cut in the solid rock and apparently leading down; it was now filled nearly to the mouth with stones and water, but must have been either the entrance to the fortress, or a secret contrivance by which to obtain water, unseen and unmolested by the enemy. My attempts to find a guide in the village were also useless, for the men were all absent; nor could we discover a second subterranean passage, which the Greek boys had heard of.

Full of disappointment at my want of success I descended to the valley, and prepared to return to Unièh; but on entering the woods I observed three or four black huts, which to my surprise I was told were iron-forges (Kamino-siděro); my informant adding also, that the neighbouring hills were full of similar iron-works. It was a real pleasure thus unexpectedly to light upon the Chalybes, with their mines and forges, agreeing exactly with the words of the poet; there was, however, no one at work in them, and I could get no information as to how or where the ore was obtained. As we returned towards the town the guides pointed out a remarkable grotto, through which ran a stream of very cold water, which they asserted came from the castle, although they admitted that no one had ever explored it. From its appearance, which was evidently artificial, I thought at the time that it might have been an ancient mine.

It was late before I returned home, but in consequence of my discoveries I arranged to remain another day at Unièh, to ascertain the site and mode of working the iron-mines, which I was satisfied must exist in the neighbour-

hood. My Greek landlord now told me, with genuine Oriental inconsistency, that the mountains in the interior were full of iron; his expression was ἔϊναι ὅλοι σίδηρο. I was also desirous of making another attempt to reach the summit of the castle-hill, which I could not help thinking must have been one of the strongholds of Mithridates, who possessed several similar places in Pontus. Indeed it is not impossible that it may be the celebrated fortress called Cœnon Chorion, which, according to Cramer, should be looked for in the mountains to the north of Niksar, although placed by Strabo at only 200 stadia from Cabira. It is now called Uniéh Kaléh, and Œnöe was sometimes called or written Cœna.*

Friday, July 15.—Having procured horses and a guide I started for the mountains five miles off to the S.S.E., where I was to be conducted to an iron-mine. After ascending a narrow winding valley through the limestone rocks we reached the summit of the hills, where I observed many black tents of Turcomans, or Kurds, of whom my Suriji said there were many in this neighbourhood. Proceeding in the same direction, the guide was soon at fault, and committed himself to the direction of a woman whom he met; she led us by a winding road, through thick natural woods and tangled coppices, to a sequestered spot, where we suddenly found ourselves in the presence of two men who were concealed amongst the bushes, and who, after a considerable parley, which I did not understand, got up and led the way. I thought myself in for an adventure; they would have had no difficulty in making me their prey, had they been so disposed; however I followed, and they soon brought me to a rude forge and hut, constructed of branches and trees. Here they spread a carpet, and invited me to be seated, and to partake of their humble fare. I had brought no interpreter with me, and it was some time before they could be made to understand that I wished to see the mines from whence the iron-ore was extracted. To this

* Cram. Asia Minor, vol. i. p. 272.

they replied that there were no mines, but that the ore was found everywhere about the hills near the surface. This they proved by scraping up the soil near their hut with a mattock, and collecting small nodular masses, which I understood was the form in which it is universally found in this district. The soil is a dark-yellow clay overlying the limestone rock to a thickness of two or three feet, and probably more in the hollows. The ore is poor, and the miners, like the Chalybes of old, must lead a hard and laborious life; they are at the same time charcoal-burners, for their own use; removing their huts and forges to a more productive spot, as soon as they have exhausted the ore and consumed the wood in their immediate vicinity.

I thought myself highly fortunate in thus meeting with these primitive miners; the life they lead and their mode of working agreeing so closely with the vivid description which Apollonius Rhodius has left us of the Chalybes, in his account of them in the Argonautic expedition:—

"Ἤματι δ' ἄλλῳ
Νυκτί τ' ἐπιπλομένῃ Χαλύβων παρὰ γαῖαν ἵκοντο·
Τοῖσι μὲν οὔτε βοῶν ἄροτος μέλει, οὔτε τις ἄλλη
Φυταλιὴ καρποῖο μελίφρονος· οὐδὲ μὲν οἵγε
Ποίμνας ἐρσήεντι νομῷ ἔνι ποιμαίνουσι,
Ἀλλὰ σιδηροφόρον στυφελὴν χθόνα γατομέοντες
Ὦνον ἀμείβονται βιοτήσιον· οὐδὲ ποτέ σφιν
Ἠῶς ἀντέλλει καμάτων ἄτερ, ἀλλὰ κελαινῇ
Λιγνύϊ καὶ καπνῷ κάματον βαρὺν ὀτλεύουσι."*

Virgil also alludes to the existence of iron in the country of the Chalybes; in juxtaposition, too, with the productions of Pontus; and yet the real site of the Chalybes has ever

* Arg., lib. ii. 1002—1010. The passage is thus translated by Fawkes:—

"Th' ensuing day the delegated band
Approach'd with oars the rough Chalybian land;
Whose sons ne'er yoke the oxen to the plough,
Nor healing plants nor fruits delicious know;
Nor aught delight they in th' irriguous mead,
Retired and still, their fleecy flocks to feed;
But they dig iron from the mountain's side,
And by this ore are nature's wants supplied.
Devoid of toil ne'er beam'd Aurora's ray,
And dust and smoke obscured the dismal day."

been a subject of doubt amongst modern geographers.* It may not, however, be quite undeserving of notice that the ore found on this spot, the abode of the oldest miners mentioned in profane history, or even alluded to by the earliest traditions, should occur precisely in such a manner, and under such circumstances, as most readily to attract the attention of a rude and ignorant people.

The mode of extracting the iron is however very slow and laborious; the ore is smelted in a common blacksmith's forge, in which 180 okes of the rude material produce three batmans or pigs of metal, weighing six okes or thirteen pounds and a half each; consequently the ore only yields ten per cent. of metal, and to procure this small quantity 300 okes of charcoal are requisite. The blast of the furnace is kept up for twenty-four hours, during which time the mass must be constantly stirred, and the scum and scoria raked off, after which the melted iron is found at the bottom, which, from the specimen I saw, appeared of a very good quality. Having no interpreter with me, I had some difficulty in ascertaining even these particulars. All the iron is sent to Constantinople, where it is bought up by the government, and is in great demand. Returning to Uniéh, we passed the remains of several forges in places where the ore had been completely worked out, and where the ground was strewed with ashes.†

On regaining the coast, and after crossing the Uniéh Sú, I determined to make another attempt to reach the summit of the castle-hill, under the auspices of a more experienced guide. It was mid-day; the heat was excessive, and its effect was really curious; every sound was hushed; not a bird was heard amongst the foliage, and even the grasshoppers had ceased to chirrup; the cattle had retreated to the shade of the forest, and the buffalo was

* Chalybes nudi ferrum.—Virg. G. i. 58.

† An interesting account of the method by which malleable iron is obtained by a single process from the ore of the mines of Karadogh, near Tabreez, in Persia, is given by Major Robertson in the Transactions of the Royal Society of Edinburgh, vol. xiv. p. 699.

bathing his parched and horny sides in the pools of the river. Man alone, in his search for knowledge or love of money, appeared to disregard the meridian sun.

However, I reached the castle in safety, but was again disappointed in my attempt to arrive at the summit, which I now convinced myself was impracticable without ropes: wherever the steep cliff appeared accessible, it had been carefully closed up with solid masonry. Within fifty feet of the summit however I found another subterranean staircase descending to a great depth at an angle of 45°. It had been finished with much care, but, having neither lights nor a rope with me, it was impossible to attempt the descent, or to ascertain its depth. I threw down some large stones, which bounded off twenty or thirty steps at a time, and I heard them distinctly for twenty-four or twenty-five seconds, when the sound became too faint to be distinguished. The steps, which had originally been carefully cut, were so worn and broken as to present a highly inclined plane, on which it would have been almost impossible to have preserved a footing. I was therefore obliged to return to Uniéh without either reaching the summit, or penetrating the recesses of this subterranean passage.

CHAPTER XVII.

Leave Uniéh—Gheuréh Irmak, anc. Thoaris—Woods of Fruit-trees—Melitsch Chai, anc. Beris—Plains of the Thermodon—Therméh—Themiscyra—Char-shambáh—Yechil Irmak, anc. Iris—Osman Pacha—Derbend Bournou—Reach Samsun, anc. Amisus—Port and Acropolis of Amisus.

SATURDAY, July 16.—No remains of antiquity are now to be seen at Uniéh, and I therefore started early for Char-shambáh, ten hours distant. After winding through the streets we crossed the promontory, on which the town is situated, and again descended to the shore, where, to the west of the point, the ruins of a Greek church were visible on a small rock in the sea. The road led for some way along the beach, where the low cliffs afforded a good section of the formations which cover the thick bedded chalk and sand-stone: these upper beds consisted chiefly of variegated blue and yellow marls dipping slightly to the N.W., and alternating with seams of sand, which, as we advanced, gradually increased in thickness, until the beds became almost wholly arenaceous, probably caused by a nearer approach to the great rivers from which the deposits were derived. The only fossils which I saw were some large Ostreæ in a bed of sand, which was again overlaid by a thick bed of diluvial soil, consisting of yellow clay and gravel, apparently the same as that in which the iron-ore is found. Three miles from Uniéh these stratified beds were much contorted, evidently by volcanic action, as the upper portion contained many angular blocks of porphyritic trap and other igneous rocks.

Four miles from Uniéh we crossed a large river called the Gheuréh or Thuréh Irmak, flowing through a well-cultivated plain, and forming a considerable delta near its mouth. This, and not the Ak Chai farther on, as supposed by Macdonald Kinneir,* must be the ancient Thoaris, to

* Travels in Asia Minor, p. 315.

which the modern name bears some resemblance, and which is placed by Arrian at 30 stadia from Œnöe.* Beyond the river the hills gradually receded, leaving between them and the sea an extensive plain, partially covered with natural forests of fruit-trees of various kinds; we had now fairly entered those fertile plains which are watered by the Thermodon, the Iris, and other rivers. The road led along a sandy plain at times wet and marshy, and covered with woods of fruit-trees, flourishing, as in Strabo's time, in all their native wildness.† Apples, pears, plums, vines, medlars, and filberts, were in great abundance, and amongst them were a few sycamores, ash-trees, oaks, and thorns.

Our direction was still west, and on again reaching the sea shore the promontory of Chalti Bournou was to be seen extending to the north, and bearing N.W. by N. This headland is the N.E. point of the great delta formed by the united efforts of the Thermodon and the Iris, and, although extremely low, is well wooded, and appears to be the Heracleum Promontorium of the ancient geographers. In passing this flat country we were often obliged to turn aside to avoid the deep morasses formed by streams, which had not the power to force their way through the beach, and whose waters are consequently left to stagnate on the plain. At nine we crossed the Ak Chai, flowing over a wide and stony bed; and on the beach we saw several boats taking in firewood for the supply of the neighbouring towns. On approaching the mouth of a deep and sluggish river, called the Melitsch Chai, which falls into the sea half a mile further north, we quitted the shore, which trended away considerably to the north. The course of the Melitsch is here very remarkable; it is evidently the ancient Beris, placed by Arrian sixty stadia from the Thoaris, while the construction of the map makes the distance exactly six miles.‡

* Arrian, Perip., p. 16. † Strab., lib. xii. p. 548.

‡ I have already observed that the construction of and distances on the map were solely the result of my own observations, and quite independent of the data of ancient authorities.

Leaving the sea-shore we crossed a rich flat country along smooth and grassy glades, surrounded by woods and shrubs, and dotted over with single trees, while other glades and plains equally verdant opened on each side, affording beautiful vistas and rides over a country uninterruptedly level for many miles. The trees near our road were not generally high, but were festooned with the long branches of the wild vine, the clematis, and other creepers, falling over from their topmost branches in the greatest profusion. To the south they assumed a very different character, being forest-trees of great size; but whether owing to the greater fertility of the soil, or to its having been longer planted, I cannot decide. The green carpet at our feet too could not properly be called grass, for scarcely the blade of a gramineous plant existed, though a great variety of wild flowers gave it that appearance.

At half-past ten we reached a small café, near to which a wooden bridge without a parapet carried us across the Melitsch Chai, flowing from W. to E., but so lazily as to seem almost stagnant. We continued some time along its left bank through luxuriant woods and rich pastures, until we reached the open plains, where we passed numerous wells for watering the cattle, which graze here during the dry season. These wells, like those in common use throughout the country, have a long pole balanced on a pivot, with a heavy stone at the short end, and at the other a wooden bucket suspended by a rope of twisted vine-twigs. Proceeding across the plain towards Thermèh, we saw many large herds of cattle, buffaloes, and horses, the property of Osman Pacha, the great proprietor of the district. The wooded mountains on the left were six or eight miles off, the woods on the right were much nearer, said to contain many thousand head of wild cattle and buffaloes. A little cultivation appeared as we approached the Thermodon, the bridge over which had been lately destroyed by the floods, but the Suriji rode boldly in, notwithstanding the apparent breadth and muddiness of the stream, and, following his

example, we got safely over without other mishap than a good wetting.

The little town of Therméh, which evidently derives its name from its proximity to the Thermodon, is on the left bank of the river, and consists of a few wooden houses, a wooden mosque, and a small bazaar. Vessels come up as far as the town for grain and rice, which they carry along the coast: these belong principally to the Pacha, who employs eight or ten of them in that trade. The cattle of Therméh are handsome and larger than usual; and every thing is produced in the greatest perfection in the province of Djanik, which extends from Uniéh to Samsun, and from the sea-shore to the mountains to the S., which run in a vast semicircle from those two places, enclosing one of the richest plains in the world. This district belongs to Osman Pacha of Trebizond, who inherited it from his father, Suleiman Pacha, one of the principal Dere Beys of Asia Minor, and formerly employed by the Porte to conquer Chappan Oglu, the Dere Bey of Yeuzgatt. Osman Pacha is one of the richest proprietors in Asia Minor, possessing above 300 chifliks or farms, the rents of which average from 25,000 to 30,000 piastres each per annum.

From Therméh to Charshambáh the same character of country prevailed, but cultivation increased, and gardens became more frequent. Flax and Indian corn were in great abundance, and the oaks and elm-trees of larger size. I was also struck with the manner in which the hedges and fences were kept, everything denoting our approach to the residence of a wealthy landed proprietor. We reached the environs of Charshambáh a little before four, and were met outside the gate by the Tatar and Dr. Giovanni, a physician in the service of the Pacha, for whom I had brought letters from Trebizond, and who conducted me to the house of the Armenian bishop, where a konak had been prepared for me. Passing through part of the town, we reached the banks of the Tocatli Sú, or Yechil Irmak, the ancient Iris, which we crossed by a long and slender

bridge. The river is here of great width, and apparently very deep, formed by the junction of the Iris and the Lycus below Amasia. A short time before my arrival it had risen to a great height, inundated the country to a considerable extent, and done much damage to the bridge, part of which was carried away. Both here and where I afterwards saw it, in the Phanarœa and at Amasia, its appearance was muddy and yellow; I cannot therefore understand why Apollonius and Dionysius Periegetes should have applied to it the epithets of "white" and "pure;"* or the λεύκαι δῖναι of Apollonius must have been of a very opaque white. Pheasants, deer, roebuck, and wild boar, are said to abound in the extensive forests which lie between the mouths of the Iris and the Melitsch Chai, besides the wild cattle, buffaloes, and horses which I have mentioned.

An additional interest attached to these extensive plains is derived from the fact of their being considered to be the district occupied by the fabled Amazons, whose principal city, Themiscyra, is supposed to have stood upon the site of the modern Therméh. Although the Themiscyra of the Amazons was probably only an invention of the poets, there can be no doubt that a town of that name really existed, inasmuch as, according to Appian and Plutarch, it was besieged by Lucullus.† I think, however, that Therméh is too near the sea, and that the ancient city should be looked for nearer the mountains. Such, however, is the intricate nature of these plains and forests, and such the ignorance of the inhabitants, that months would elapse before they could be thoroughly explored. It is, however, a singular fact that the range of mountains which surrounds them still retains the name of Masón Dagh; and Apollonius says that the mountains from whence the streams which formed the Thermodon descended were called Ἀμαζόνια. He also bears witness to the numerous waters which traverse these ex-

* Apoll. Rhod. Arg., ii. 366. Dion. Peri., 783.

† Plut. in Vit. Lucull.

tensive plains, known in former days by the name of Dœantius Campus.*

The Yechil Irmak is said to be full of fish, and the sturgeon is caught near its mouth. The inland fishery however is not in the hands of Turks, but of the descendants of Russian or Cossack settlers who, having escaped from Russia about fifty years ago, established themselves in different parts of Asia Minor, and on the banks of the Danube. These are now fast disappearing; but I was told that several colonies of Russian fishermen still existed on the shores of the lakes: along the sea-coast the Greeks are still, as they have ever been, the only fishermen.

Sunday, July 17.—I halted this day at Charshambáh to see Osman Pacha, and to procure a Tatar to accompany me through Asia Minor. The house in which I lodged was close to the Armenian church, from whence a most terrific noise proceeded, which awakened me long before sunrise; it was in honour of the festival of St. John: the screaming, shouting, and yelling, which was called singing, exceeded anything I ever heard, and lasted until nine o'clock.

In the afternoon I visited the Pacha, who lives in greater state than any Turk I have yet seen. He is an old man, of diminutive stature, with an intelligent but very singular countenance, and, wishing to receive me with honour, and at the same time to avoid rising to meet me, which a Turk never does for an European, he contrived to be walking about his room when I was announced. He seemed quite lost in his ample cloak of honour; and, being desirous of standing well in the opinion of his sultan, he wore, like all his attendants, the new semi-European dress and fez, which gives the wearer a mean and ridiculous appearance; it did not therefore surprise me to hear him speak of it with disgust. When we were seated, coffee and magnificent pipes were produced, after which sherbet, excellent of its kind, but highly perfumed and scented with attar of roses, was handed round.

* Apoll. Arg., ii. 972.

The antiquities of the neighbouring countries were amongst the principal subjects of our conversation, and although I could learn nothing respecting Themiscyra, I was told that considerable ruins were to be seen at Sonnisa, near the junction of the Lycus and Iris, and about eighteen hours from Charshambáh. Dr. Giovanni also described some extensive Hellenic ruins near Cape Jasonium, between it and the island of the Cilicians.

As to the productions of the province, I learnt that very fine silk was raised here, and sold at eighty piastres per oke, or seven shillings per lb.; exclusive of a government duty of twenty piastres per oke. I know not what the admirers of the administrative abilities of the Turks would say to this mode of raising a revenue, but the imposition of such a tax on the raw produce of the country, which is exported in large quantities, does not seem to be the best means of promoting its prosperity; the fact is, that the Turks, instead of being such great proficients in all fiscal and administrative measures, as some of their admirers have pretended, systematically encourage every kind of monopoly, and by their arbitrary duties do all in their power to stifle any sound and healthy trade.

Osman Pacha has lately built himself a new house on his paternal property, and a gay straggling building it is. The harem is said to be very large, and full of wives, ladies, and slaves. His first and legitimate wife always resides here, never accompanying him to Trebizond. His eldest son, whom he has made Mutzellim of the place, is said to be an idiot, and has a guardian or assessor to assist him in the discharge of his official duties. Charshambáh contains 200 Armenian and 150 Greek houses; the Turks, with few exceptions, generally living in detached houses or villas outside the town.

I here learnt that a regulation had been lately made by the Turkish government, to the effect that no Greek, Turk, or Armenian, who has been once married and settled, shall be allowed to change his domicile or to move his family;

he may travel about either in the pursuit of business or in search of employment, but his family cannot go with him. This does not affect the unmarried. The object of so harsh a measure is said to be to facilitate the taking of the census, with which they attempt to combine an enumeration of the property and possessions of each individual.

Monday, July 18.—I was detained for several hours by want of horses, in consequence of the arrival of a Bimbashi with despatches for Reshid Mehmet Pacha in Kurdistan; and it was past eleven before I started with a new Tatar, Hafiz Agha. This man accompanied me in all my subsequent journeys in Asia Minor, and I found him extremely useful on many occasions, giving in to all my plans and wishes, notwithstanding the prejudices of caste with which he was imbued: nor do I believe that his love of money, which was very great, ever led him to the commission of an act of dishonesty whilst he was in my service.

On leaving Charshambáh, the English-looking appearance of the country was much increased by the fine timber-trees growing in the hedges. At the third mile we crossed a stream, flowing as I was told from a small lake on the left, called Turkman Bohar Ghieul. Farther on we passed through a grove of lofty elms, from the tops of which the branches of the wild vine hung down nearly to the ground; and as we advanced towards the hills on the left, we observed them stretching in a semicircular direction towards the sea, between us and Samsun; cultivation gradually ceased, the woods became more wild and tangled, and the ground wet and marshy. As we passed a small café soon after two, a number of peasants were drawn up in a line, and going through their devotions in the open air, under the directions of their Imaum or Hodja; their motions were performed simultaneously, with military precision, although, when Turks perform their devotions in the open air, it is more usual for them to do so singly.

From hence we proceeded along a narrow causeway, con-

sisting of sand and gravel, about thirty feet in width, and with traces of having once been paved; but whether the remains of a natural beach, or an artificial embankment intended to carry the road through the morasses, I could not ascertain. The swampy ground on each side was covered with thick and scarcely penetrable woods, in which large herds of cattle grazed in unrestricted liberty; the causeway could be traced for about a mile, probably marking the line of the ancient road from Amisus. We passed a small stream flowing to the north, and a few wooden huts, as we reached the verge of the forest, in which were many fine trees. Wolves, bears, and badgers are said to abound in these unfrequented districts, and if the "castorea Ponti"* were the produce of the beaver, the marshy plains and woods on the banks of the Thermodon and the Iris probably furnished the localities whence they were obtained.

But we soon reached a more inhabited country, and near a small village saw some land which had been lately cleared. By four o'clock, within a mile of the hills to the left, we crossed several streams flowing to the sea; one of which must be the Chadisius, placed by Marcian between the Lycastus and the Iris, but at a distance of 150 stadia from the former and 100 from the latter: the hills themselves appeared well cultivated, and are said to produce much tobacco; they rise abruptly from the level plain, which in many places is covered with box. At half-past four we reached the sea-shore at the foot of the hills, which here form a promontory, called Derbend Bournou, close to which we crossed another stream. On the beach were a few houses and a café: we saw also some boats loading and unloading their cargoes, chiefly wood and stone.

Ascending by a broad and excellent winding road we crossed the little promontory, formed of a coarse, loose, volcanic breccia, dipping to the N. and N.E., and over-

* Virg., G. i. 58. Virgil also alludes to the drugs of Pontus, "Ponto lecta venena," E. 8, 95, which may be either the oil of the beaver or the poisonous honey of Trebizond.

laid by beds of compact peperite. The harbour itself, like most ports in the Black Sea, is on the eastern side of the promontory, and, although its distance from Samsun does not agree with the accounts of the ancient geographers, I think it not unlikely that Derbend represents the cape and harbour of Ancon mentioned by Apollonius* and others. It is the first headland to the east of Amisus, and the only place before reaching the mouth of the Iris where a harbour can exist, the whole coast from hence to Chalti Bournou, the ancient Heracleum Promontorium, being one flat, unbroken, sandy beach.

There is a great contradiction in the statements of ancient writers respecting the distances on this part of the coast; Marcian, who appears to have derived his information from Menippus,† gives the following account:—

From Amisus to the Lycastus . . .	20	stad.
,, the Lycastus to the Chadisius .	150	,,
,, the Chadisius to the Iris . . .	100	,,
	270;	

while Arrian only gives 160 stadia as the whole distance from Amisus to the Iris, and then 360 from the Iris to the Heracleum Promontorium, which is decidedly too much. At the extremity of Derbend Bournou, which is now covered with bay-trees, a small stream falls into the sea between two precipitous headlands, probably the Chadisius of the ancients, though only twenty stadia from the Lycastus. On the whole, the account of Arrian is the most correct; as the 160 stadia from Amisus to the Iris are very near the truth, the only necessary correction being to suppose that the harbour and promontory of Ancon were at the mouth of the Chadisius, not of the Iris.

Soon after reaching the shore we passed under the guns or rather the embrasures of a small Turkish fort. From thence to the banks of the Mers Irmak the country is

* Arg., ii. 369. † Steph. Byz. ad v. Χαδίσια.

flat and marshy; this river, flowing through rich and luxuriant plains, is the Lycastus of the ancients, between two and three miles from the Acropolis of Amisus, from which it was twenty stadia distant. The plain, which was covered with corn and olive trees, became much narrower as we approached Samsun, being hemmed in by a range of low hills bearing the same produce.

The Turkish castle of Samsun, which is washed by the waves to the N.E., appears to have been built at two different periods, the lower portion being composed of large square blocks, while the upper part has been repaired with small stones. I do not however believe that the former is Hellenic, but rather Byzantine, though constructed with materials derived from the ruins of Amisus; the upper part is merely a Turkish restoration or addition.

I was no sooner established in my konak, in a small house near the Waiwoda's residence, than I was visited by two Europeans, one of whom, a German, was physician to Abdullah Bey, brother of Osman Pacha. He had travelled much in Asia Minor, and evidently with his eyes open. He first told me of the existence of the large and interesting town of Safframboli, twelve hours west from Castamuni or Castamboli, and of the singular character of its neighbourhood unknown to all our modern maps.* He said it was the site of the ancient Theodoropolis, and was remarkable for a handsome race of people celebrated for their hospitality.

This German doctor, who had lived five years in Turkey and spoke the language well, confirmed me in my opinion respecting the moral character of the Turks, and the effects produced by the late changes and reforms. It is certain that they have lost all their former national character, the bold and reckless love of glory, which, even without discipline, made them fearless and gallant soldiers. Instead of being already regenerated, as some pretend, I believe such regeneration is impossible so long as they remain

* Mr. Ainsworth has since visited and examined it.—See Journal of R. G. S., vol. ix. p. 238.

Mahometans. The best among them have no feeling of honour or of courage; and having lost their ferocity, religious pride and bigotry constitute the only moral feeling they possess, and they are by turns tyrants and slaves; tyrannical to those below them, and offensively servile to their superiors. The Yeuzbashi, or captain, who tyrannizes over the privates, will consider it an honour to be allowed to fill his colonel's pipe, or execute any menial office for him; and I had myself many opportunities of witnessing in my own Tatar instances of the same overbearing conduct and mean servility.

Tuesday, July 19.—I started early with a Greek guide to visit the ruins of Amisus, Eski Samsun as they are called by the Turks, on a promontory about a mile and a half N.N.W. from Samsun. On the eastern side of this promontory, called Kailou Bournou, is a low sandy marsh, on which stands a modern fort. This was once part of the harbour of Amisus, but the greater portion of it is now converted into gardens. From its N.E. extremity the pier which defended the ancient harbour may be distinctly traced, running out about 300 yards to the S.E., but chiefly under water. It consists of large blocks of a volcanic conglomerate, some of which measure nineteen feet by six or eight, and two feet in thickness; whilst a little farther north another wall extends E.N.E. to a natural reef of rocks. Ascending the northern face of the promontory, I entered a small cave, the mouth of which appears to have been once defended by a strong wall, and within is a spring of excellent water. A few Greek letters are rudely carved on the roof near the entrance, now scarcely legible. The Greeks call the place ἡ πηγή. Looking down from the cliff I saw many large shoals of fish called κέφαλαι amongst the rocks, but my guide complained that they could not catch them! On the summit of the hill, where once stood the Acropolis, are many remains of walls of rubble and mortar, and the whole ground is strewed with fragments of Roman tiles and pottery. Near the north end is a large cistern, stuccoed

within, and at a little distance to the S.E. are the remains of a square building with a round tower at one corner, apparently of Byzantine construction, with Roman tiles mixed up in it. The extent and direction of the ancient mole are very visible from this elevation. Near the south end of the brow of the hill overlooking the harbour I at length discovered traces of the real Hellenic walls; they are not extensive, but it is impossible to mistake their peculiar structure; and at the foot of the hill are the ruins of a small church, formerly dedicated to St. Theodore, but since converted into a mosque, the foundations of which consist of large blocks of stone, derived from the ruins of Amisus. On my return to Samsun I again visited the castle, and in the wall towards the sea found two small bas-reliefs, representing Cupids supporting garlands or wreaths, let into the wall. The towers, instead of being square, are merely projecting angles, or rather triangular.

CHAPTER XVIII.

Wealth of Osman Pacha—Leave Samsun—Eusene—Koumjaas, anc. Conopeium—Road to Bafra—Tobacco—Town of Bafra—Alatcham, anc. Zalecus—Road along the Coast—River of Chai Aksa—Scenery—Reach Kousoufet Ova—Breed of Cocks—Road to Ghersék—Its commerce and trade—Ghersék to Sinope—Cross the Chobanlar Chai, anc. Evarchus—Reach Sinope—Its present condition—Antiquities—Geology of the Peninsula.

THE accounts I had already received of the immense wealth of Osman Pacha were confirmed by the German doctor, who said that, in addition to his numerous farms in the province of Djanik, the amount of the contributions levied in his province is at least four times greater than what he annually transmits to Constantinople. He also holds the monopoly of tobacco, considerable quantities of which are produced in this province and in the neighbourhood of Bafra; this yields him about three millions and a half of piastres per annum, of which he sends the half-million to Constantinople, keeping the remainder for himself. Indeed, I was told that his income was so large, that, notwithstanding his great expenses, he was enabled to lay by three millions of piastres, about 30,000*l.*, annually.

This hoarding up of treasure is one of the peculiarities of Turkish character; another which I have had frequent opportunities of observing is the total absence of all commercial speculation. They cannot understand the object of looking forward to prospective advantages, or of laying out a portion of their capital on the chance of doubling their income, and having their capital repaid in a few years. Even the government prefer receiving a small revenue without outlay to a larger one, which would require the outlay of a small capital. On this principle they never invest any sums of money in the public mines, preferring to farm them out, however disadvantageously, to contractors. The consequence of this want of capital is, that all the mines are

ill worked, and the great mineral wealth of the country is thrown away.

Wednesday, July 20.—Samsun to Bafra twelve hours. I started soon after five, and, as we quitted the town, passed a large warehouse, called by the Turks Ambar, and used by the government as a storehouse for corn. The road led along the sea-shore, and over the promontory of Kailou Bournou, close to the Acropolis of Amisus, from whence we descended to the beach. The country was flat and slightly cultivated, being a narrow strip of land between the mountains and the sea. At half-past six we crossed a stream which had formed a delta on the coast; and about three miles farther, another with a low point near its mouth, on which were the ruins of a small battery, hastily thrown up against the Russians.

Somewhere in this neighbourhood, though no traces of it are now recognised, must have stood Eusene, placed by the table at a distance of eight miles from Amisus, and twenty from Naustathmus. The road continued along the beach the whole way from Amisus to Koumjaas, which corresponds with the ancient Conopeium, a marsh between Naustathmus and Amisus, but nearer to the former; its distance from Amisus being sixteen miles, and Naustathmus being about five miles farther north. Arrian, who makes the distance from Conopeium to Eusene 120 stadia, and from Eusene to Amisus 160 stadia, makes that from Naustathmus to Conopeium 50. From all these distances, I think it probable that Eusene should be looked for more inland, where it is placed by Ptolemy, unless the twenty-one miles on the map between Amisus and Naustathmus may be considered an equivalent for the twenty-eight miles of the tables.

Passing along the shore, we saw large quantities of drift-wood lying on the beach, sometimes consisting of whole trees brought down by the violent torrents of the Kizil Irmak, the Lycus, or the Thermodon. On the left the plain extended towards the wooded hills, two or three miles

off, but which gradually receded before we reached Koumjaas. We were now entering the district, which by some geographers has been considered to be that of Pteria, celebrated by Herodotus * as the country in which the great battle was fought between Cyrus and Crœsus. This, however, should be looked for farther south, as, although said to be opposite the Sinopian territory, it was considered as a part of Cappadocia; besides which, this extreme northern district could hardly have been in the line of country through which Crœsus would have passed on his march towards Persia.

Koumjaas is a small port, and serves as the scala of Bafra, where the tobacco grown in that district is shipped for Constantinople. Several vessels were waiting for their cargoes in the roadstead, which is said to be safe throughout the winter. A backwater formed by a stream which here falls into the sea, and from which it is separated by a ridge of sand, nowhere above a hundred yards across, forms a harbour, near which are a café, and a few wooden shops and stables, used when the bazaar is held, and forming a small quadrangle, defended by a low rotten bank, with two or three holes for embrasures intended for guns equally useless.

Samsun Bournou, or Kailou Bournou, bore from Koumjaas S. 53 E.; and while the horses were baiting, I obtained a meridian altitude which gave 41° 28′ 30″ N. lat. At half-past twelve we started for Bafra, and leaving the sea-shore, and passing round the western side of the lagoon, soon entered a sandy but grassy plain, chiefly covered with rich and luxuriant woods. As we advanced inland the forests became thicker, and the trees much larger; and in contrast with the grassy glades, produced a striking mixture of forest and park-like scenery, the pleasing effect of which was increased by the cattle grazing at large over the unreclaimed district. About two miles from Koumjaas I turned off from the road to visit a salt lagoon, which

* Herod. lib. i. 76.

extends many miles from N.N.E. to S.S.W., having to the N. a communication with the sea, from which it is separated by a narrow neck of land. It appears to be a portion of the Naustathmus; the ground about it is low and marshy, the water shallow, and it agrees with the concise description of Arrian:—"From the river Halys to Naustathmus, where is a marsh, 90 stadia; thence to Conopœium, another marsh, 50 more." Near the southern extremity of the lake, where I rejoined the road, were the ruins of some Turkish baths, from which the lake has acquired the name of Hamamli Ghieul. To the right the plain was bare for some distance, but our road continued through woods and grassy glades, where we fell in with a party of Kurds, both men and women, on horseback; the women were not veiled, and some of them might be called handsome.

At half past three, having travelled N.W. six or seven miles from Koumjaas, we ascended a ridge of low sandy hills devoid of wood, and with little cultivation. These hills towards the south extended to the foot of a high range of mountains, while to the north they sloped away towards the plain about two miles off. Soon after four we descended into the plain of Bafra, and as we approached the town passed several chifliks and cottages in the plain, which became more frequent as we advanced. Near the town the ground was marshy, and we entered the place by a long and narrow causeway. It had a clean and quiet look, embosomed in gardens and trees, with nothing but the tall minaret of the mosque to announce that we were approaching a town of so much consequence. I was informed by the Greek papas, whose residence I found prepared for my reception, that it contains 1160 houses, of which 1000 are Turkish, 100 or 110 Greek, and 50 Armenian. I could not learn that any fine wool was produced in this district,* or anywhere between this and Samsun, which is an additional reason for not supposing it to have

* Strabo, lib. xii. p. 546.

been either Pteria or Gadilonitis. The small quantity of silk grown in the neighbourhood is not sold, but used for home consumption. My host, the papas, was one of the best of his class that I had met with, and entered into several details respecting the education of his fellow-countrymen. He said that the Turks had lately permitted Greek children in this part of the empire to be instructed in their own language instead of Turkish, as had hitherto been the practice; adding, that the Greek Bishop of Cæsarea had of late been very active in organizing schools throughout the country.

Thursday, July 21.—It was nine A.M. before we started for Alatcham, a distance of six hours. The crowded streets announced that it was bazaar or market day, and the road by which I left the town was thronged with peasants, many of whom were driving small carts laden with tobacco, the produce of the neighbouring districts, each arrabah or cart only carrying four bundles; each bundle weighing from twelve to fifteen okes, or from twenty-eight to thirty-five lbs. All the tobacco of Anatolia is conveyed to Constantinople in similar packages, while that of Roumelia is made up in smaller parcels, and enclosed in cotton. The dried leaves in a rough state sell here for eighteen or twenty piastres the batman, each batman containing six okes, nearly threepence per lb.

With regard to the gathering the tobacco crop, I understood that the whole plant is not stripped at once, but the leaves are plucked one by one, as they attain their proper size and maturity. Four or five leaves are then tied together, and hung upon strings to dry in the sun, after which they are packed in bundles; but the great difficulty is to know the point to which they should be dried, which can only be learnt by long experience, for, if too dry, they break in packing, and if not dry enough, they are apt to get mouldy.

About a mile from Bafra we reached the banks of the Kizil Irmak, flowing from S.W. to N.E. in two narrow

beds, about 300 yards apart from each other. The first branch we crossed by a long wooden bridge; the second we forded: in the rainy seasons, however, the mass of water must be very great, for the stony bed of the river was above a quarter of a mile in width. The colour of the water was precisely that of the Tiber, more yellow than red, which is the real meaning of the word kizil. A high hill called Nebbian Dagh bore from the west side of the river S. by E.; its peculiar shape makes it a landmark for vessels coming from the Crimea. At ten we reached the foot of a range of low wooded hills, near which was a well, where the rope used for drawing up the water consisted of a single vine-branch, between twenty-five and thirty feet in length. I had often seen in the forests long shoots hanging down from the tops of the highest trees, but none of such a length as this; being very supple, they answer the purpose of a rope tolerably well. The wood on these hills was chiefly oak, but as we advanced along them wild apples, pears, and medlars became more abundant. The roads were excellent, and well adapted for the light carts of the country. The soil consisted chiefly of beds of gravel, sand, and clay, like those to the east of Bafra, and appeared to be the remains of the detritus washed down from the interior by the Halys through the mountain gorges to the south, and spread as a delta over the bottom of the sea; and through which, after it had subsequently emerged or been elevated above the level of the sea, the river had made a new and deeper bed.

Descending from these hills, from the tops of which we had an extensive view to the N.W., we reached the plain at eleven, affording excellent pasture for horses, which were grazing in all directions. A large fresh-water lake, said to be full of fish, and from which a stream runs into the sea, was pointed out three miles off to the N.N.W. For some distance the road led through natural orchards of apple and other fruit-trees, and various creepers. The apples,

though not quite ripe, were perfectly sweet; on crossing the Halys we had entered Paphlagonia, which, even in the time of the Romans, was celebrated for its apples. The road continued close to the wooded hills on our left, while pasture and arable land extended towards the sea to the right. Soon after twelve we reached a small café, and halted for half an hour under the shade of some fine plane-trees. Many old peasants were loitering about the place, and I was struck with their neat and simple dress, entirely of white cotton, except their sandals, which were made of buffalo hides, and laced half way up the legs, protected by stout stockings made by themselves of a thick white cotton-stuff; loose white drawers, over which in winter are worn thick cloth shalwar trousers, and a white shirt, with a white turban round the head, and a white or coloured shawl for a sash, completed their costume.

After leaving the café we passed for several miles through a rich and well-enclosed country, abounding in hedgerows, while numerous streams from the hills varied the scene to our dusty eyes, and gave a sure promise of abundant crops. The hills on the left were well wooded; at half-past two we entered a narrow and well-watered valley to the south, and in about half a mile reached the village of Alatcham. On the banks of the small stream, as well as near the entrance of the valley, were some of the finest plane-trees I had anywhere seen, but their tops were mostly gone — broken off or injured by time and weather. I measured the girth of several at about three feet from the ground, where the diameter was least, and found that one was thirty-five feet, and several others above thirty feet in circumference.

The house which was assigned to me for my lodging had such a filthy and uncomfortable look, and the dry green grass before it, near the river, was so tempting, that I determined to have my tent pitched for the first time, and found it most cool and delightful: while the servants were preparing it, I wandered up the valley to the ruins of an

old castle or fortress, about a mile from the village, on the summit of a pointed and wooded hill. I reached it with some trouble, after scrambling through thickets and briars, but found nothing to reward the toil. The view towards the north, however, was picturesque; and as I descended by another road to the village, I unexpectedly met with, on a lower hill, the ruins of a more considerable building, but so completely buried in the woods, and overgrown by shrubs, that it was impossible to have any idea of its plan or extent. The solid walls, which are built of alternate layers of stone and bricks, like those of Constantinople, appeared to belong to the Byzantine period, but I saw neither doors nor windows. The situation of the valley and ruins corresponds with that of the river and town of Zalecus, mentioned in the Periplus of Marcian, and called Zaliscus by Ptolemy, at a distance of 150 stadia from the river Halys and 390 from Sinope. At five P.M. the thermometer stood at 82° Fahr. in the shade, and at nine P.M. at 77°.

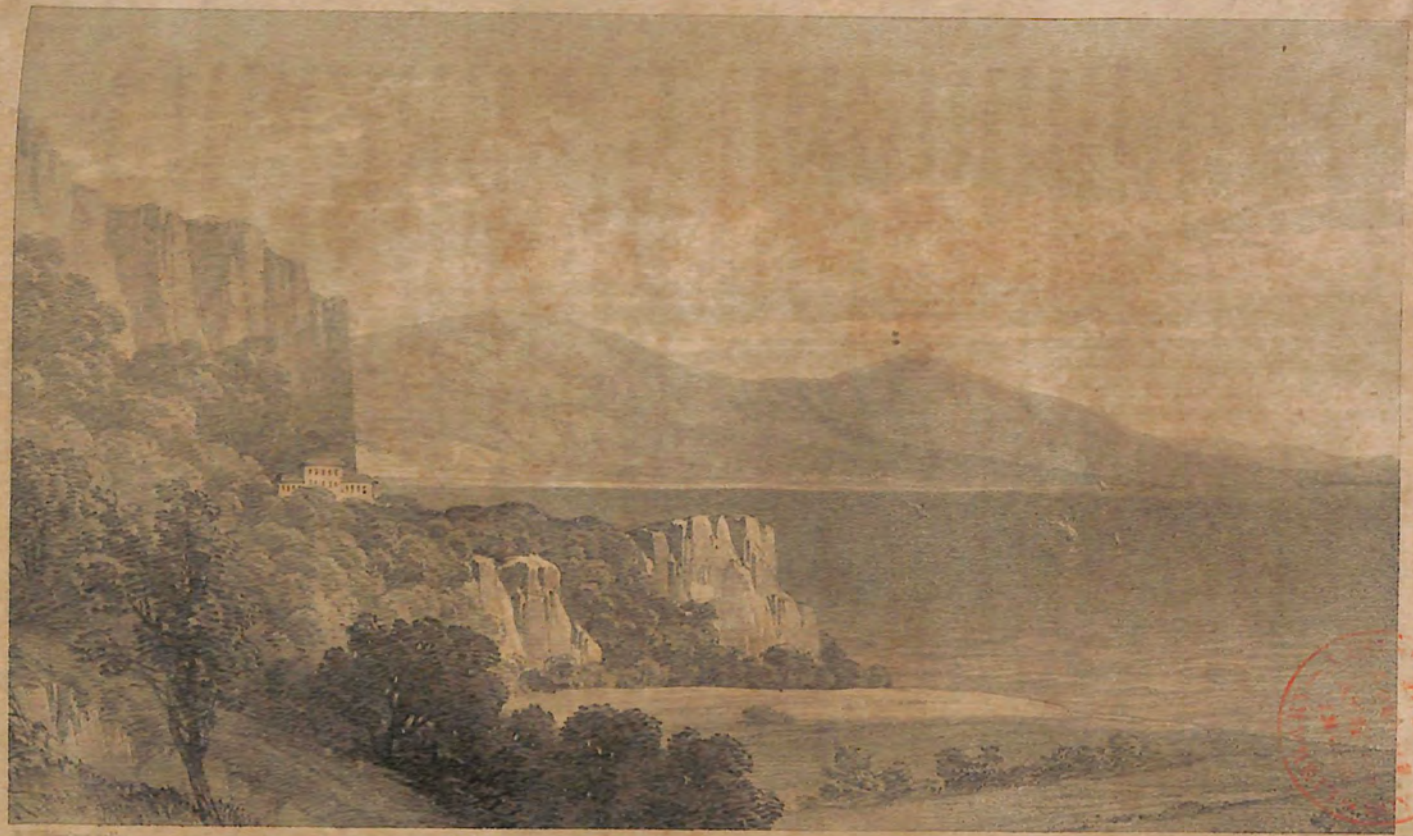
Friday, July 22.—Thermometer at five A.M. 66°.—There was no Menzil in the place, and the Chiaya was obliged to levy horses from the peasants. I was surprised at the distrust the owners showed of one another; they would not allow the Tatar to pay the whole sum to one person, but each insisted upon his own share, however small, being paid to himself separately. It was nearly seven before we started, having a difficult and mountainous road of twelve hours before us to Gherséh. Two miles in a N.W. direction, over a flat and well-cultivated country, brought us to the sand-hills on the beach, along which we proceeded for several miles; the plain on our left, which produced barley and Indian corn, gradually narrowing, and the wooded hills approaching the sea-shore. About four miles from Alatcham we crossed several small streams, at half-past eight we passed a Turkish burial-ground, the limits of Osman Pacha's government, and soon afterwards crossed a river called the Kubeasi-Chai, flowing from a large and well-wooded valley. A point of land looking like an island, which I saw from

this spot, bearing nearly N.N.W., proved to be the point of Sinope.

Proceeding towards the river, called Kara Ondja Sú, we rode two miles and a half in a W.N.W. direction along the shingly beach, with the wooded hills close to us, consisting, as well as I could judge from a few denuded sections, of horizontally-bedded white marly limestone in the upper portion, with a few beds of sandstone, traversed by veins of calcareous spar. In the low cliffs near the beach the beds are much contorted, but with an almost vertical dip towards the south, and consist of limestone, both marly and semi-crystalline, sandstone, and shale, the limestone being separated by wayboards of micaceous shale. I observed no traces of organic remains, except those imperfect appearances which bear a general resemblance to fucoids, and are so numerous in the shale formation near Trieste. I nowhere perceived any appearance or indication of coal, but further on found a few nodules of coarse flint of a blackish colour.

At a quarter before ten, after passing a rocky point, we halted for half an hour under the trees on the banks of the Kara Ondja Sú, where it issues from a deep and rocky gorge; and when the horses had somewhat recovered from the effects of the shingly road, we again proceeded for a mile and a half in a N.W. direction. This portion of the road was exceedingly bad, being only a narrow path between the perpendicular cliff and the blue waves, over huge masses which had been precipitated from above, and where we were obliged alternately to enter the water to avoid the rocks, and to scramble over the rocks to avoid the deep water, to the great distress of the horses and injury of the baggage. At a quarter after eleven we left the beach, and, crossing a low ridge of hills, suddenly came in sight of the Chai Ak Sú, the mouth of which was immediately below us, entering the sea between the ridge on which we stood, and a rocky hill to the west.

Descending from the hill, our road led some way up the



thickly-wooded valley, watered by this river, which we crossed and recrossed several times. The plane-trees, which grew luxuriantly in the bottom, were large and flourishing, like those at Alatcham; but many were pollarded. After following the river some way towards the west, we turned north, and ascended, through oak and fir trees, the steep hill running from east to west, and separating the valley from the sea, and to avoid which we had been compelled to leave the sea-shore. Its almost perpendicular sides must have once rendered it a place of great security, and likely to have attracted attention in former days. There can be little doubt that it was the site of Zagora, which Arrian places at 150 stadia from Carusa—the same distance as from Carusa to Sinope; and on measuring the coast-line on the map I find exactly fifteen geographical miles from Carusa to the mouth of Kara Ondja Sú. This proportion of ten stadia to a geographical mile, although certainly not always correct, nor could it indeed be so, I have generally found more available in the application of comparative geography than any other: and again, the distance measured on the same map from Carusa to Sinope is within half a mile the same, viz. fifteen and a half geographical miles.* Moreover, Marcian makes the distance from Carusa to Zagorum less than from Sinope to Carusa, the latter being 150 stadia and the former only 120; besides which he calls Zagorum as well as Carusa χωρίον, rendered into Latin by Castellum.

It has been supposed by some writers that this Zagora is the same as the Gazorum of the anonymous Periplus, which was afterwards called Calippi. I conceive, however, that Gazorum must be looked for further to the east, for the writer of the anonymous Periplus places it at 150 stadia from Garzubanthon, which is itself sixty stadia from Carusa; and moreover he makes the distance from Gazorum to the river Zaleeus only ninety stadia. We have thus two or three

* It is almost unnecessary to repeat that the map was laid down and the positions fixed before any attempt to supply these ancient names was made.

distinct lines of places, the positions of which alternate with each other, but the whole number of stadia in each is nearly the same.

	Arrian.	Marcian.	Anonym.
Sinope to Carusa	150	150	150
Carusa to Garzubanthon ..	,,	,,	60
Carusa to Zagora	150	120	,,
Garzubanthon to Gazorum	,,	,,	150
Zagora to Zalecus	,,	120	,,
Gazorum to Zalecus.....	,,	,,	90
Zagora to Halys	300	,,	,,
Zalecus to Halys.....	,,	150	110
	600	540	560

Thus we see that, by introducing the whole distance as far as the Halys, Marcian and the anonymous Periplus very nearly coincide, the only material difference between them being with regard to the position of the river Zalecus: it is therefore possible that the river alluded to, which is sometimes called Zaliscus, may not be the same in both narratives, although the inaccuracies, which do frequently occur in these authorities, might alone be sufficient to account for the discrepancy.

Having reached the summit of the ridge, our road ran some way along it, until we descended on the north side, which sloped rapidly towards the sea Here the road became extremely beautiful, passing through luxuriant woods of arbutus, myrtle, bay, oak, and kiziljik. Of the arbutus there were two distinct species, one common, the other, which I had occasionally seen upon the hills near Smyrna, remarkable for a very clean, smooth, and red-barked stem, with its branches growing in a bolder and more rounded manner like the andrachne. The road was very fatiguing for the horses, and at half-past one we halted at a fountain to rest them: a peasant cut some barley on the mountain-side, and brought it for our cattle.

The promontory of Sinope, as seen from hence, had quite the appearance of an island, the isthmus by which it is connected with the main being too low to be seen. After passing for several miles over hills covered with the finest vegetation, with wooded hills rising to a great height on the left, we reached Kousoufet Ova, a small village of seven or eight houses, a little before five; and finding it was impossible to get on to Gherséh to-night, I had my tent pitched on the village-green, while the horses were picketed around. This place, as well as the neighbouring town of Gherséh, is celebrated for a remarkably fine breed of fowls, which are sent to Constantinople as presents even to the Sultan. One game cock was brought for my inspection, and he certainly was an extremely fine bird, standing very high upon his legs. The thermometer in my tent at 5 P.M. was 84, at 7 P.M. 78, and at 10 P.M. 73. On looking out of my tent at this late hour, I was much struck with the picturesque scene around me, which was rendered distinctly visible by the brightness of the moon. The horses were picketed close by, while the Tatar and my servants had rolled themselves up to sleep in their capotes under the trees, near the dying embers of the fire, at which our dinner had been dressed, while a little farther off a party of villagers, with the Surijis, were sitting round a blazing fire watching the preparation of a kid roasted whole, in honour of the arrival of strangers; but for which the strangers were of course to pay.

Saturday, July 23.—We broke up our encampment early, and were in the saddle soon after five. For two miles we passed through a wooded country in a N.N.W. direction, gradually receding from the sea, as the coast near Kousoufet trends away to the north, forming a bay in which Garzubanthon, the station mentioned by the anonymous Periplus as 60 stadia from Carusa, was probably situated. As we advanced our direction became more northerly, the country more wooded, and our path more intricate; in some places we had difficulty in getting the baggage horses through

the thick forests, and over the bad roads; but the scenery was beautiful, and we enjoyed a succession of views of the sea and the headlands of Gherséh and Sinope, seen through the openings of the forest. The trees consisted chiefly of bay, myrtle, arbutus, laurel, and fir; but I was uncertain whether what I called the red-stemmed arbutus was not rather a species of laurel or andrachne, which is said to grow on this coast, for, although it had the jagged-edged leaf of the arbutus, and bore a berry resembling it, the leaf itself was perfectly smooth, more ovate than that of the arbutus, and extremely bitter to the taste. At half-past seven we crossed a river called the Hissar Chai, beyond which, in addition to the trees above mentioned, I also observed oak, beech, hornbeam, and others. After passing through a thick natural wood of arbutus and laurel, we soon reached the gardens and vineyards of Gherséh; and, after crossing a bad causeway for some distance, changing our direction to E.N.E., we entered the town soon after nine.

Gherséh, anc. Carusa, contains about 240 houses, all of which, except about 25 Greek, are Turkish. In consequence of the heat, I determined to halt here until the afternoon; and accordingly took up my quarters in a small café near a kind of dock-yard, where they were building two merchant brigs, each of about 100 or 120 tons burden. A Greek informed me that the hull of such a vessel, without rigging or fixtures, would cost about 40,000 piastres, or about 400*l*. There seemed, however, to be but little trade: though they send to Stambul corn and fruits, and a small quantity of timber and planks. A cock and hen of the breed already mentioned cost here twenty piastres, the price of common fowls being from six to eight the pair. I strolled about the place for some time, and visited the narrow point which forms the harbour, where is a ruined wooden fort with six brass guns. Passing through the town I saw what had once been the pedestal of a statue, but without an inscription; in the wall of an old Byzantine church, however, I found

one fragment,* as well as another in a Greek church close by, in the court-yard of which were two Corinthian capitals and several small broken columns. These were all the evidences of antiquity I could discover, and they had been probably brought from Sinope; but the name of the place sufficiently proves it to be on the site of the ancient Carusa, 150 stadia from the former place. The description of the harbour, as given by the anonymous Periplus, is quite appropriate, though not according to the usual translation of the passage. The words are λίμενα τοῖς ἀφ' ἑσπέρας ἀνέμοις, which are translated "portum patentem ventis ab occidente flantibus;" but the real meaning of the Greek must have been "a good harbour when the wind blows from the west," which is the case.† Arrian merely says that it is a bad station for ships.

The distance from Carusa to Sinope was 150 stadia or eighteen miles, according to the anonymous Periplus. By the present road it is six hours or eighteen geographical miles; and as I was anxious to arrive there before dusk, I left Gherséh at a quarter before one, the hottest part of the day. For some time the road was excellent; hedges of bay and myrtle served to protect the gardens and orchards on both sides of the road, after which we emerged on a wild open country, with a few scattered trees; we then crossed a small stream, flowing N.E., and again entered a well-cultivated district, where the fields, also enclosed with hedges, were teeming with crops nearly ripe. Nowhere in Asia Minor had I seen a country so English in its appearance, or so like one of our own rich arable counties. Sinope too appeared to great advantage over the deep blue sea. Soon after two we crossed the Yaikeul Chai, a clear stream flowing over a bed of limestone rocks, and continued for two or three miles, the roads being frequently bad and

* See Appendix, No. 50.

† The same error is made in the translation of the passage in the Periplus of Marcian.

boggy, through country of similar description, here and there broken by a few woods.

At half-past three we descended to a flat plain near the sea, watered by the Chobanlar Chai, the transparent water of which rushed rapidly over limestone rocks, while the banks were covered with plane-trees growing in great luxuriance. This river is the Evarchus mentioned by Arrian and other old geographers* as being 80 stadia from Sinope, and 70 from Carusa. It was the boundary between Paphlagonia and Cappadocia, when the limits of this latter province extended to the Euxine. After crossing the river we soon regained the sea-side, from whence we proceeded along the beach, and half a mile beyond the river passed a few huts, called Chobanlar, where some boats were being built on the beach, marking the spot which was probably the station called Cyptasia by Ptolemy, and Cloptasa by the Table, seven miles from Sinope; it was a place of no importance, and no traces of it are now visible. After proceeding for nearly two miles along the shore, we crossed an extensive plain running far up into the country towards the W. and N.W., on which many large herds of buffaloes were grazing. From thence, leaving the coast, we ascended low wooded hills, over which the road led for two or three miles, gradually bending round to N. by E.: the character of the country to the walls of Sinope consisted in a succession of low hills reaching to the water's edge, and covered with wood. At half-past six, within two miles of Sinope, we passed a fountain, where the cover of a sarcophagus had been used as a trough; soon after which we found ourselves amongst gardens and villas. For a mile or two before reaching the town, the road led partly along, and partly by the side of, a causeway, or paved road, in places much injured, but wider than most others which I have seen in Asia Minor.

A few minutes after seven, descending from the sand-hills

* Valerius Flaccus.

before the walls, and passing by the Turkish burial-ground, where many fragments of columns were lying about, I was struck with the singular form of the graves, which looked like square boxes, formed by flat stones placed upon their edges. The narrow isthmus was covered with fine sand blown up by the prevailing north-west winds. On this side Sinope is defended by a strong wall, apparently Byzantine, which stretches across from N.W. to S.E., and which is strengthened by several towers, some of which have swerved considerably from the perpendicular. We entered the outer gate of the town by a narrow winding passage through the wall, and then passed eastwards, between the citadel on our right, and the sea wall on the left, to the inner gate. We rode quickly through the streets, and issuing again on the east side, soon found ourselves in the Greek quarter, where the Governor had assigned me a konak. The place is said to contain 500 Turkish houses within the walls, and 300 Greek houses, all outside, and chiefly to the east of the town.

It was with feelings of the greatest satisfaction that I at length found myself within the walls of this celebrated city, once the capital of the kingdom of Mithridates Eupator,* by whom it was much embellished, and who also formed a harbour on each side of the narrow isthmus; a city no less illustrious in its origin, than in its defence against hostile attacks, and in its final fall; and remarkable as the birth-place of the cynic philosopher Diogenes. Its modern name is Sinab; but nothing remains standing of its once celebrated buildings, its magnificent halls, and the beautiful temples, with which it was embellished by successive princes and rulers; the few traces of its former magnificence, which I subsequently found in rambling about the town and neighbourhood during the three days I remained there, will be described in the following pages.

* Strab. xii. p. 545. Polyb. xxiv. 10. 2. Justin, xxxviii. 5. Plut. Lucull. c. 18. Appian, Bell. Mithr. c. 83. Cic. pro leg. Manil. 8. Steph. Byz. v. Σινώπη.

Sunday, July 24.—In the course of the morning I called upon the Governor, who was civil and intelligent. Our conversation turned much upon the steam communication which had lately been established between Constantinople and Trebizond. Like a true Turkish courtier he professed to be pleased with it, because it was encouraged by the Padishah and his government, not for any merit which he saw in it himself, or any specific benefit to be derived from it, although Sinope has been made one of the principal coal depôts. He had adopted the Turkish maxim of "*nil admirari*" in the greatest degree, which accounted for his total want of curiosity respecting the mechanical merits and advantages of a steamer. During our conversation I was surprised to see a half-witted idiot come into the room, who addressed himself occasionally to those about him, but totally regardless of what was going on. I afterwards learnt that he was the Bey's brother, and being quite harmless was allowed unrestrained liberty to go about, and do as he pleased. It is well known that the Turks show great kindness and attention to idiots and insane people, believing them to be under the peculiar protection of Providence.

Quitting the Bey's apartment, I proceeded to explore the town and ruined walls in search of antiquities and inscriptions; but out of regard for Giuseppe and the Tatar, both of whom were the worse for the hot weather of the last few days, I left them at home, and went alone with the Chavasse of the Governor. Near the eastern gate the whole of the wall across the isthmus on this side has been built up with fragments of ancient architecture, such as columns, architraves, &c., and I promised myself a rich harvest of inscriptions. The same profusion of ancient fragments existed in the court-yard of a mosque near the centre of the town, where they were arranged on each side of the different paths and avenues leading to a large fountain. In many of the principal streets fragments of architraves and columns are seen in the foundations of the houses; and the outer wall to the west is also formed of similar remains;

amongst them were pieces of cornice, with fragments of two different inscriptions;* No. 54 was on the entablature of a cornice, enriched with garlands and the caput bovis; Nos. 53 and 55 were on a plain cornice. All appeared to have belonged to edifices erected by or in honour of the Emperor Germanicus. A large marble lion is also worked into the same wall towards the south. Passing through the gate of the inner western wall is a long inscription over the gateway; with some difficulty I procured a ladder to reach it, but it was modern Greek, and bore the date of 1781.

I then proceeded to visit the citadel, or Utch Kaléh, as it is called by the Turks, which extends across the isthmus to the west of the town. These walls are composed of ancient fragments, proving the complete destruction of former buildings. Outside the gate, on the circular pedestal of a statue which had been hollowed out, and converted into a mortar for grinding or bruising wheat, is an inscription in honour of Antonine, the son of Antoninus Pius, and concluding with the letters C.I.F., which are the same which occur on the imperial coins of Sinope, signifying Colonia Julia Felix.† The inner portion of the wall on the west side of the citadel is raised upon arches, supported by piers of very beautiful construction, which appear Roman, and are probably the remains of an aqueduct. Pliny the Younger‡ was anxious to supply the wants of the Sinopians by bringing water from some place sixteen miles off, if the ground would bear the weight of such a heavy building. I nowhere saw any certain vestiges of an aqueduct in the neighbourhood of Sinope, though this wall was perhaps part of it; at present the town is supplied with water from the peninsula itself. A portion of the inner wall on this side is also built in the same style as the aqueduct, and is strengthened by two square towers, the outer angles of which are cut off. The blocks of stone are all of one size; the towers have narrow oblong windows or loopholes, and the construction is very perfect;

* See Appendix, Nos. 53—55. † See App., No. 52. ‡ Plin. Epist. x. 91.

and I have no doubt that they are part of the old Roman wall. The second or outer wall, which extends across the isthmus, is built of old materials, and is probably the work of Byzantines or Genoese. Being raised upon sand, some of the towers have fallen from the perpendicular, and still present a grotesque appearance, more recent fortifications having been built upon them. From the tower at the S.W. angle I could trace the ancient mole, by which the port was formerly defended, extending under water in an irregular line the whole length of the city, leaving a narrow opening for small vessels, which is even now the only entrance to the harbour.

The citadel is inhabited by Turkish families, and contains nearly fifty houses. Crossing the town to the north I passed through a sally-port, and descended to the beach, where the wall was built upon a sharp decomposing shelly limestone, which I was surprised to find full of small circular holes, apparently resembling those described by Strabo, under the name of Chœnicides;* but those which I saw were not above nine inches in diameter and from one to two feet deep. There can, however, be no doubt that such cavities would, if larger, render it almost impossible for a body of men to wade on shore. They seem to have been caused by pebbles knocked about by the violent action of the waves in small hollows. The rock itself, which is almost entirely formed of shells, was much used by the ancients in the construction of their public buildings. In a tanner's yard near this entrance were several sarcophagi, used as troughs, on one of which was a short inscription.†

In the evening I proceeded to the east of the town, to visit what was called the ruins of a temple, a short way up the hill. They belonged to an old Byzantine church built of alternate layers of brick and stone. Within it was

* Strabo, lib. xii. c. 3, where is a long description of the mode in which the town is built.

† See Appendix, No. 56.

a modern Greek church almost entirely under ground, with a few broken columns lying near. I set about a fruitless search for inscriptions in the Turkish burial-ground, but on a slab of yellow freestone, remarkably well preserved, and which appears to have supported a statue, close to the eastern wall of the town, I found the following lines:

"Ὁκρατερος Πολιουχος αναξηγιρατο ταυτην
Νευματι τῳ σφετερῳ χαλκοτυπου παλαμαις,
Στηλην ευλανοιο τον ευενοησατο θεσμος
Πειθομενον σκηπτρεις αιεν ακηρασιοις
Δερκεο μοι φιλος ὡδε νοημονα τεκτονα χαλκου
Ἡφαιστου σοφιης σωμα μιμησαμενον."*

Monday, July 25.—I rode over the greater part of the peninsula, extending about five miles from east to west, and which strictly coincides with the description given of it by Polybius.† About three miles E.S.E. from Sinope is a small village called Nesi Kieui, near which are a few corn-fields. A stream flows from the village to the south. At a fountain was a very large sarcophagus, used as a trough, from which I copied the inscription,‡ which appears to have been erected by some celebrated physician of antiquity. Few trees grow on the peninsula, although the soil is rich and volcanic. On my return I again renewed my search for inscriptions, and succeeded in finding a few small fragments.§ No. 62 on a sarcophagus is interesting, from the use of the word κολωνεια, which proves it to have been subsequent to the Roman conquest; and as some of the letters are of a peculiar form, it shows at what period certain forms of letters were in use. The Latin inscription, No. 63, from the court-yard of the mosque, is on a column, and is probably perfect, but I was not allowed to dig it up; and it was only after scraping away the soil with the hammer that the few words which are given could be deciphered.

On the slope of the hill to the east of the town are

* See Appendix, No. 58.
† Polyb. lib. iv. c. 56.
‡ See Appendix, No. 59.
§ See Appendix, Nos. 57, 60, and 61.

substructions and vaults built with Roman bricks, and the ground about is strewed with fragments of pottery and tiles. One building particularly attracted my attention; it consisted of three large vaulted chambers, which, from the incrustation on the walls, probably formed a cistern. About 200 yards higher up the hill, was a spring and fountain excavated in the rock, to which a narrow entrance had been formed of regularly hewn stones. The water now used in the town is entirely supplied from the peninsula; it is conveyed by small earthen pipes, all the springs in the hills being collected together and carried in pipes to the east gate, where they unite, and are thence conducted across the bridge to be dispersed through the town.

The population and prosperity of Sinope are not such as might be expected in a place affording such a safe harbour between Constantinople and Trebizond. I observed also a general appearance of poverty and privation throughout the peninsula. Many Roman and Byzantine coins were brought me, and a few silver of Sinope, some of Amisus, and a beautiful silver one of Kromna; but the occasional arrival of the steamer, and the consequent increase of communication with the capital, had taught the owners to ask large prices.

Tuesday, July 26.—The general characters of the geology of the peninsula are simple. The eastern extremity consists of trachytic rocks, which towards the west are succeeded and partly overlaid by black volcanic breccia and peperite, containing angular fragments of trap or trachyte. The western part of the peninsula consists of calcareous beds, which I am disposed to refer to the scaglia or cretaceous formation. All these are horizontal, and the lower portion is a hard compact scaglia, like that of Greece and the Ionian Islands. This contains no fossils, but is overlaid by beds thirty or forty feet thick, containing a great variety of shells, amongst which are Corbula and Modiola. The beds vary considerably in hardness, and some are rather silicious. Near the summit of the hill are the

ancient quarries, in which lie large blocks hewn and ready to be removed. The stone is the same as that on which the town is built, but whether a different bed, or the same thrown up by a fault, I could not ascertain. Neither could I find the line of junction between the limestone and the trachyte, so as to form any conjecture of their relative ages.

CHAPTER XIX.

Leave Sinope—Mountainous road to Boiavad—Mehmet Bey Oglu Kieui—Boiavad—Its castle and geology—Costambol Chai, anc. Amnias—Douraan—Kizil Irmak—Its junction with the Costambol Chai—Vizir Keupri.

THE time had at length arrived when I was to quit the shores of the Black Sea, and in the afternoon of the 26th July I started from Sinope for Boiavad, eighteen hours, having engaged horses for the whole distance, and before dark reached the village of Delliler, four hours S. by W. from Sinope, still keeping along the sea shore until within a mile of Chobanlar. At Delliler my tent was pitched on a small green before the Oda, in the midst of a cultivated country abounding with gardens and orchards.

Wednesday, July 27.—I left Delliler at half-past five, and descended towards the beach for half a mile, when the road turned to the south, and we struck into the interior through a thickly-wooded country. Hornbeam, but of small size, was very abundant, as well as a species of oak with a peculiarly jagged dark-green leaf. After crossing several small streams flowing into the Chobanlar Chai, we changed our course to S.W., and descended into a wooded valley, where we crossed the Chobanlar, here called the Caboular. This river is formed by the junction of two considerable streams about half a mile higher up, one of which, called the Kirketchit Chai, flows from the S.S.W., and the other, the Caboular, from W.S.W. We then descended a wooded ridge of hills sloping rapidly to deep valleys on either side, and affording a constant variety of bold and picturesque scenery. The hills consisted of semi-crystalline limestone, sandstone, and marls, dipping N. and N.E. at an angle of 40°, overlaid by a bed of yellow clay or marl containing white calcareous concretions.

After some time the descent became more rapid by a

rough and stony road; soon after nine we reached the banks of the Kirketchit Chai, or the river of forty passages, so called because, as I was told, we were to cross it at least forty times. Having reached the opposite side, we halted on the bank under the shade of some gigantic plane-trees; from thence we continued S.W. by S. for several miles along the river-banks, constantly crossing from one side to the other, and sometimes riding along the bed of the river. The steep hills on either side were well wooded, and many saw-mills had been erected for preparing the planks, which are conveyed to Gherséh for exportation; others are split and used as shingles for roofing. The banks afforded several sections of the different strata, consisting of blue shale and limestone, dipping N. by E. 40°, with a few beds of sandstone, some of which were much indurated, resembling compact Lydian stone or jasper, with a conchoidal fracture. After ascending the valley about three miles from our halting place, we suddenly came upon a mass of trap rock in immediate junction with vertical beds of altered sandstone, and in a state of decomposition. It again appeared in the river-bed about a mile higher up, *en masse*, near a lonely wooden mosque on the left bank. Our road still continued along the valley, occasionally ascending the hills on either side, or winding through the low wooded grounds which skirt its banks. A mile farther was a good section of the altered sandstones overlying the trap rock; this sandstone was horizontally stratified, and almost altered to jasper, the upper beds being less altered than those below, and retaining the granular appearance of sandstone. It appears in cooling to have assumed a columnar structure, vertical fissures penetrating all the beds. The trap rock below completely resembled that described above, but exfoliated in decomposing, whereas the former separated into rhomboidal fragments. Farther up the valley I found the same succession of limestone, sandstone, and shale beds, dipping to the south, first almost vertical, then from 50° to 60°, and farther on only 35°

or 40°,—thus clearly proving the existence of an anticlinal line caused by the protrusion of the trap rocks above described.

Presently the road entered a narrow and deep ravine, the opposite sides of which, scarcely forty feet apart, rose almost perpendicularly to a height of several hundred feet. In many places there was no other path but the narrow and rocky watercourse, which the baggage-horses had great difficulty in ascending, and which in rainy seasons must be quite impassable. Bad however as this was, it became worse when we ascended the side of the ravine to the right, by a winding path amidst rugged rocks and thickly-tangled wood. At length, a few minutes before two, after a laborious ascent, during which the baggage-horses several times came to a stand-still, and some of them narrowly escaped falling over the precipices, we reached the village of Mehmet Bey Oglu Kieui, situated in the midst of wild Alpine scenery, over which I wandered in the evening, and enjoyed a most delicious natural bath in the wooded ravine below the village.

At four P.M. the thermometer was 85° Fahr.; by six P.M. it had fallen to 69° Fahr. At this time a most extraordinary thick mist was ascending the valley by which we had passed, the effect of which was very striking; as the huge and compact masses of vapour were driven up the main valley to the south, instead of turning to the west towards us. Soon after nightfall, however, it reached our station, and spread over the surrounding hills. The natives said it was a common occurrence after a hot day; but that it would blow off in the course of a few hours, and re-appear again in the morning. Before nine P.M. it was all gone. The vapours drawn up by the sun from the sea during the day, seemed to have been driven by the sea-breeze against the northern flanks of the mountains, where they were condensed in a much colder region.

Thursday, July 28.—At six we started amidst fog and mist from Mehmet Bey Oglu Kieui. For the first mile the

country was open and undulating, with few patches of cultivation, and large clumps of wood on all the neighbouring hills. A mile and a half from the village we descended into a deep ravine extending nearly east and west, where the contrast between the two sides in point of vegetation was very remarkable; that to the south facing the north being covered with firs, wild pears, beech, and hornbeam, all clothed with a profusion of thin, long, pendent, hoary moss, while that to the north was perfectly bare. A little farther on the valley was joined by another from the S.W., which we ascended, while the united streams flowed together towards the N.N.W., apparently falling into the Chobanlar Chai. The valley which we now entered was thickly wooded, the fir and beech trees had attained a considerable size, and some of the latter were truly magnificent; but the woods were cold and damp, and even the beeches, instead of presenting as usual a smooth and shining bark, were covered with a long hoary lichen. As we advanced the scenery became wilder and more Alpine; the mountains stretching far away to the east and west, and wooded to their very summits, still bore those extensive forests, for which, under the name of Peucia Silva, the shores of the Black Sea were celebrated in antiquity, and through the uncleared and undisturbed labyrinths of which we were now following a wild and rarely trodden track. Sinope can boast but little intercourse with the interior; its commerce and communication with the capital are alike carried on by sea; and the difficult nature of these mountain-passes, which during many months of the year are absolutely impracticable, gives to it, as it were, in fact, as in appearance, the qualities and characteristics of an island.

At a quarter before eight we had reached the culminating point of this chain of hills, which forms an undulating plain partly covered with clumps of wood, and separates the waters which fall directly into the Black Sea from those which feed the Kara Sú, or Ghieuk Irmak, the ancient Amnias. The view from the heights was very extensive; to the

S.W. the chain of mountains called Elek Dagh was most conspicuous, while the valley of the Kara Sú lay before us to the south, beyond which were five distinct ranges of hills rising one above the other, and all extending from east to west. A few minutes before eight, after emerging from the forest, we reached a small yaila, or summer village, the wooden huts of which are probably not very different from those alluded to by Xenophon,* in the country of the Mosynœci, where I had seen similar abodes along the shores of the Euxine. They are on the sloping side of a hill, and consist of two floors or apartments: that which is entered from the lower ground, and is the smallest of the two, having a kind of shed supported by wooden pillars in front, serves as the stable; while the other, which is entered from the higher ground, and extends over the shed or portico, is the dwelling.

From hence we decended to the bottom of a deep valley, watered by a considerable stream flowing S.E. The woods here became thin and scanty, consisting of wild pears and oaks, and a shrub called Kiziljik, which bears a small red berry not unlike the jujube, but more acid, and which is much relished by the Turks. The upper formation of these hills is a thin-bedded micaceous sandstone, dipping north; but lower down, consists in a great measure of thick-bedded limestone, with the same north dip, but at a greater angle. At nine o'clock, three miles from the yaila, all trees and wood were fast diminishing, and a mile farther south they had entirely disappeared, except on the banks of the streams or in the immediate vicinity of the villages, so that the country had assumed a burnt-up yellow hue, forming a striking contrast with the luxuriant vegetation which I had left on the shores of the Black Sea. A few minutes after nine, quitting the rocky valley on our left, we crossed a remarkable ridge of conical hills, stretching S.S.E. in a straight line one beyond the other; and after baiting our horses near a small village celebrated for its honey, we en-

* Xen. Anab.

tered an extensive arable country teeming with ripe crops. Here I was struck with the want of population, and hands to get in the harvest, for much of the corn was evidently over-ripe: the absence of wood too was a great drawback to the extensive landscape, and its want was but ill supplied by a few fields of millet, which were still green; as for meadows and pastures there were none, the horned cattle as well as the horses being fed on straw. From this plain we descended into a narrow gorge or watercourse worn in the sandstone rocks, by which the drainage of the plain is effected. For above a mile we followed the sinuosities of this singular ravine, the perpendicular sides of which were in many places not above 100 or 200 feet apart, and from 40 to 50 feet high, consisting of sandstone, shale, and yellow calcareous marl, and sometimes a conglomerate of pebbles of white quartz and dark schistose rocks, dipping S.S.W. At length we turned from west to south; the hills which had hemmed us in gradually disappeared, and we crossed a small plain about a mile and a quarter from north to south, surrounded on all sides except to the west by low sand-hills.

Here I observed an elongated shell, a species of Bulimus, peculiar to the basin of the Black Sea, hanging in great numbers from the branches of almost every shrub. The appearance of this graceful shell, in such abundance as to resemble the fruit of a plant, is very striking, and presents a remarkable instance of the manner in which nature adapts herself to the various exigencies of animal life. The slimy secretion of the animal is dried up as the hot weather comes on, forming an air-tight substance, by which it is defended from the effects of the heat, and at the same time suspended from the branch; with the returning moisture the slime is dissolved, and the animal is at liberty to seek its food. Thus these creatures remain in a state of torpidity during the summer, whereas others generally pass the winter in that state. Tournefort * calls this shell a Buccinum.

At 11h. 20m. we crossed another ridge of hills, from

* Engl. Transl., vol. ii. p. 330.

whence we descended into the plain watered by the Kara Sú, or, as it was here called, the Costambol Chai, which we reached in less than half an hour. I could not learn that this river was here known by the name of Kara Sú, although it is sometimes called the Giaour Irmak. We forded the two branches of it without much difficulty, and continued for nearly half a mile along the south or right bank, amidst fields of rice, corn, and millet, separated by rows of fruit-trees, until leaving the river we crossed the plain towards Boiavad, the picturesque rock and castle of which appeared about two miles off to the S.W. by S. These extensive plains, watered by the Giaour Irmak, or ancient Amnias, are celebrated for the great victory gained by Mithridates over Nicomedes king of Bithynia, and the Romans under Marius, in the year B. C. 88, at the commencement of the first Mithridatic war.*

Notwithstanding the great heat, I halted at noon to obtain a meridian altitude, which gave the latitude 41° 27′ 30″ N.† Ascending the bed of the Boiavad Sú, we had a fine view of the narrow gorge, through which the torrent has forced its way between two lofty rocks. The ruined castle crowns the summit of the eastern point, which must be between three and four hundred feet above the bed of the river. We soon entered the town of Boiavad, where I took up my quarters in a large verandah outside a Turkish house, where the thermometer at four P.M. was 92° Fahr.; at five, 90°; and at six P.M., 86°. At 10 P.M. it was 83°.

This town contains about 300 houses, most of which are Turkish; some few are also inhabited by Greeks. Numerous villages, lying chiefly along the banks of the Giaour Irmak, are dependent upon it as their principal town. Large quantities of rice are grown in the district, the usual price of which is eight or nine piastres per batman of six okes, or 14 or 15 lbs.; but it was now much dearer.

* Appian, Mithr., c. 18. Strabo, lib. xii. p. 562.

† Mr. Ainsworth, who has been there since with better means of observation, makes the lat. of Boiavad 41° 26′ 42″.

In the evening I visited the castle, said to be Genoese, but probably Byzantine; it is not large, but is defended by square and round turrets on the N.E. side, where alone it is accessible, and by a moat, over which was once a drawbridge. From the summit of this hill I could see far up the verdant plain, through which the Boiavad Sú flows from the S.W. until it reaches the narrow gorge above described. This plain is called Kaz Dere, and produces much rice. There is something very striking in the appearance of the castle-hill; its remarkable elevation above the chain of hills, of which it forms a part, is owing to the protrusion of a mass of trap-rock or serpentine of a dark-green hue, on which it reposes; the superincumbent strata consisting of thin-bedded micaceous and talcose schists, which are overlaid by the white scaglia limestone dipping towards the north.

Friday, July 29.—I was kept awake last night by the lugubrious howling and screaming of a party of Turks who had established themselves on a neighbouring rock, where, regardless of the hour or the repose of the inhabitants, they continued their wild singing without break or interruption for several hours. The performance consisted, as well as I could distinguish it, of a monotonous chaunt kept up for a considerable time by one person in a very low note, while the others occasionally joined in the chorus. The solo part was apparently made up of verses sung with a kind of air, but of which the three or four concluding notes always seemed wanting, which produced an incomplete and unsatisfactory effect. During part of the performance, the chorus chimed in with a sort of half-minute gun, consisting of a single note, begun very loud, and gradually dying away, sustained for some time without break or shake. The same note was always renewed, and apparently at very regular intervals. The whole produced a most unpleasant effect, not unlike the baying of dogs to the moon.

On a second visit to the castle-hill I observed that whereas the scaglia limestone had been upheaved without dis-

turbance, the schistose beds were much contorted. This is a common occurrence where schistose and limestone beds have been equally elevated; the schists, in consequence of the little adhesion and firmness between their respective particles, being easily contorted, whereas the more intimately connected particles of the limestone, particularly when the strata are thick, resist the effect of the disturbing cause. On my return to the town I found the horses were not yet arrived, and that high words had passed between my tatar and the Agha. The latter having called Hafiz a charlatan because he had refused some horses offered him, on the ground that they were unfit for the journey, Hafiz retorted by telling the governor he was a rebel for not complying with the orders of his Sovereign, and providing horses immediately in obedience to the firmahn. This obedience, aye, and the most implicit passive obedience, to the orders of the government, is constantly in the mouth of every Turk in office, and is a curious feature in their character; they will sometimes even bring it forward ungraciously enough as the reason of their hospitality and civility towards strangers. The answer of the Bey of Sinope mentioned before was an instance of the kind.

At length the necessary supply of horses was obtained, and at half-past nine we started for Vizir Keupri, eighteen hours. Our road led due east for two miles, winding between low sand-hills, amidst which was the Turkish burial-ground, until we entered the plain of the Costambol Chai. These hills consisted chiefly of a loose pebbly conglomerate, with a few larger boulders; the pebbles were chiefly quartz, jasper, and schist; the general dip was to the N.N.E., that of the range of low hills on the north side of the river being also to the N.E.; thus rendering it probable that, while the northern dip of the mountain-chains is to be attributed to the same powerful causes which elevated the whole internal tract of central Asia Minor, these local formations acquired their eastern dip from the protrusion of the trap rocks which underlie the castle of

Boiavad. On reaching the plain we continued east for above half a mile, until we crossed the river by a long wooden bridge, when we descended the valley along the river-side. Besides some rice plantations I saw a few poppy-fields, and many mastic trees, called here Sakeul, but I could not learn that any gum was collected from them. On the lower part of the hills to the left there was a scanty supply of box and thorns and other shrubs, and higher up, a few solitary and stunted pine-trees, the dry sandy soil not being suited to a very luxuriant vegetation.

At half-past eleven we crossed a wide valley, opening to the north, and producing much corn, which was now almost carried. The bed of the stream by which the valley is watered was nearly dry, but a violent torrent rushes down in the rainy seasons, being the same which we had passed the preceding morning, as we descended from the mountains. Soon after twelve the valley became considerably narrower, the hills reaching the water's edge, contracting the bed of the river, and producing a greater fall of water, which the villagers have taken advantage of, for purposes of irrigation, by throwing dams more than half-way across. At one we again descended into the plain, in which we continued for a mile and a half, our general course still E.S.E.; beyond which we passed a succession of low gravelly hills, stretching down to the river; between these hills several small plains trended away to the north. The soil, though apparently well cultivated, is considered poor, and the crops are said to be generally small.

At half-past two we reached Douraan, situated on the northern bank of the Costambol Chai, and in the midst of a fertile plain; the village however gave no signs of wealth, and the only konak I could procure was the court-yard and portico of the mosque: the tent was pitched in the former, while the dinner was cooked in the open air, and the servants established themselves under the portico. While resting in the tent a large ear of Indian corn roasted whole was brought to me as a great delicacy. I was told that

this grain produced from fifteen to twenty fold, whilst wheat and barley gave only from four to five. The system of rotation of crops is quite unknown here, but the peasants have learnt by experience that the land will not bear corn two successive years without suffering, and therefore let it remain fallow every other year; thus one-half of their arable land is constantly out of cultivation. The hills on the opposite side of the river are well wooded to the water's edge. Near the mosque are seen the ruins of a large building of brick and stone, with a handsome arched entrance formed of well-cut blocks, which is called a khan, and has an Arabic inscription over the gateway. The stones of the arch are fitted together in a very peculiar manner, sometimes seen in old Gothic and Byzantine buildings, and which I had also remarked in the ruins of the ancient theatre at Smyrna. On the lower side of each stone a projection is left, which fits a corresponding groove in the stone below; the key-stone has consequently this projection on each side, as in the annexed diagram, the intention being, we may presume, to ensure greater stability.

No. 10.

Arch at Douraan.

Saturday, July 30.—I started from Douraan at half-past five, having to the north an extensive view of high and pointed hills about six miles off. Our course was N.E. for half a mile, and then E. by S. for nearly four miles through a plain in many parts of which I observed fields of rice. At 6 h. 20 m. we were abreast of a remarkable rock about a mile off on the south bank of the river, which formed the termination of a long and narrow ridge of hills, declining in a N.N.E. direction from the mountains to the south, and corresponding with similar rocks on our left—it is called Kapou Kaiya, or Rock-gate, and it separates the Ghieuk Irmak or Costambol Chai from the Kizil Irmak, or Halys,

immediately above their junction. Several caves are visible on the face of it. The limestone rock on our left rests upon thin-bedded schistose rocks, resembling those near Boiavad. At a quarter before seven we reached the junction of the Costambol Chai and the yellow and scanty waters of the Kizil Irmak, flowing from the S.E. A few minutes further on we came in sight of a lofty pointed rock, called Eghri Kaléh, bearing due south, eight or ten miles off, on the summit of which were said to be the ruins of an ancient castle.

Immediately below the junction of the Costambol Chai with the Kizil Irmak the river sweeps round to the south, flowing for nearly three miles through a narrow plain, the soil of which appears to have been a lacustrine deposit, consisting, as seen in the terraces partly remaining on the left bank, of diluvial blocks, gravel, and sand: we then entered a narrow defile between lofty and nearly perpendicular limestone rocks so close that their sides seemed almost to touch, and where the only track was along the bed of the torrent. The limestone was dark-coloured, very compact, and semi-crystalline, with numerous white veins traversing it in every direction, and it emitted a slight fœtid smell when struck. Huge blocks were strewed about on all sides; but I could not distinguish any appearance of stratification, yet, from the lines of verdure on the hills, the dip appeared to be towards the north. The beds of shale underlying it dipped distinctly to the N.N.E.

As we descended the valley, the wildness and grandeur of the scenery increased at every step, offering an agreeable variety of wood, water, and rock. On the opposite or southern side of the river the mountains rose to a great height, intersected by deep and wooded ravines, backed by several rugged peaks, amongst which Eghri Kaléh was most conspicuous, while rocky pinnacles rose from the water's edge, the banks of which were thickly covered with shrubs and underwood. The river appears once to have formed a series of lakes in this part of its course, where is now a succession of alluvial plains, separated from each other by

rocky passes through which the river has forced its way, flowing with increased velocity. After passing the narrow gorge above mentioned, our path continued for nearly four miles, either along the wooded bottom, or over the rocky ridges which stretched down to the water's side, or along the edge of precipitous cliffs overhanging the torrent, where a false step would have sent horse and man into the roaring waters beneath.

Soon after nine we reached a more open country, consisting of undulating slopes covered with thorns, agnus castus, and small mastic plants; and we at length entered a large plain covered with millet and corn, the road keeping along the banks of the river. At ten I stopped to examine a mass of limestone rock, nearly twenty-five feet in height, and the same in diameter, lying close to the road on the river side, and far from any mountains whence it could have been detached, although it had probably been washed down from one of the passes above by the force of the torrent. On the north face a small cave had been cut into it, with a narrow entrance leading to a chamber scarcely sufficient to turn round in. I climbed almost to the top, but could discover nothing more, and found neither figures nor inscription on its rough sides.

At half-past eleven the ruins of a bridge over the Kizil Irmak were seen about half a mile to our right, of which fragments of the stone piers still remain on each side. After crossing another range of green micaceous hills, the road continued along a flat and grassy terrace about fifty feet wide, between the hills on our left, and the river below us on the right: this terrace was evidently the remains of an extensive alluvial plain, which had once filled the whole valley, through which the river now flowed with a winding course. At a quarter before one we passed the ferry-boat used when the river is full; it was of a triangular form and of very rude construction, flat-bottomed and with straight upright sides, formed of loose boards slightly nailed together. The oars which hung by the side were

also of a strange form, having the appearance of enormous carving knives with disproportionately large handles. On the whole, I thought fording the river less objectionable than trusting to such a fragile conveyance; we continued for some way looking out for the ford, and at length met the guide whom Hafiz had left to point it out to us. The flat and sandy bed was now partly dry, the river was nevertheless of great width, and the current strong. We succeeded in fording it nearly in a diagonal direction, and were exactly six minutes in the water, which was nowhere more than three feet deep, and generally scarcely reached the knees of our guide; but we were obliged to take a very zig-zag line in order to avoid much deeper places. Immediately below the ferry, the Kizil Irmak changes its direction from S.E. to N.E., flowing down a narrow valley between high and precipitous wooded mountains. Our road soon left the river, and after ascending a lateral valley producing wheat, millet, Indian corn, cotton, &c., we reached the small village of Cheltik, two miles E.S.E. from the ferry, and said to be nine hours from Douraan and fifteen from Boiavad. The regular afternoon breeze had set in, and it blew so strongly that we had great difficulty in pitching the tent on the stony ground; we found only women and children in the village, the men being all absent getting in their crops. The hills to the east of the village, which are moderately wooded, consist of argillaceous schist dipping N.E., but the ground is everywhere covered with diluvial boulders, and gravel containing pebbles of limestone, jasper, grit, flint, &c. From the hills near the village I had a fine view of the picturesque gorge through which the Kizil Irmak flows to the N.E., and of Eghri Kaléh bearing W. 32 N.

Sunday, July 31.—We started at half-past five for Vizir Keupri, three hours, ascending a narrow valley to the S. and S.S.E. for about two miles. Corn was growing in the neighbourhood of the village, but as we approached the rocks of limestone and schist, its place was supplied by thickets

and low woods of thorn, juniper, privet, oak, and mastic. Another mile, E.S.E., brought us to the head of the valley, where we found ourselves on an extensive undulating plain, chiefly arable, and sloping gently towards the east, while several detached hills and ridges of limestone rose above the surface. Over this undulating ground our direction changed from E.S.E. to S.E., until on reaching the brow of a hill the town of Vizir Keupri appeared below us about half a mile off. Its appearance was cheering and picturesque, the houses mostly concealed by trees and gardens, and contrasting well with the burnt-up country around, while a few lofty cypresses and poplar-trees, rivalling the minarets of the mosques, broke the uniformity which the scene would otherwise have presented.

At the outskirts of the town we crossed the bed of a torrent flowing from the mountains on the west; the greater portion of the water had been drawn off for the purpose of irrigating the gardens, which extend several miles along its banks from the town to the mountains, affording a plentiful supply of fruit and vegetables to the inhabitants. On entering the town I was struck with the width and regularity of the streets, but the houses were as usual poor, and in a ruinous condition. In my search for antiquities I was followed by a numerous train of idlers, whose curiosity was excited by the unusual sight of a Frank accompanied by a tatar, wandering about in search of old stones, for what purpose they could not guess. I was followed by several hundred persons of all classes and ages, but without the slightest insult or inconvenience; on the contrary, several were anxious to point out inscriptions* in the interior of houses and shops, besides those which are in the walls of the Bezestan. There are two over each of the gateways, which are sepulchral. No. 64 is in a very imperfect and mutilated state; but appears, from the words and the emblems, viz. a looking-glass and a comb, to be that of a girl of fourteen years of age. No. 65, also over

* See Appendix, Nos. 64—67.

the gate of the Bezestan, is well preserved.* No. 67 is nearly perfect, but would be more interesting if it had retained the names of the persons of whom it so feelingly describes the domestic affection and grief. I found it with another built into the wall of a small shop, but the latter was so much defaced that I could only make out the last line MNHMHΣXAP. The Eski Hamaum, an old Turkish bath, was pointed out to me as a ruin, but its construction was evidently Turkish. In the walls, however, many large blocks of marble derived from ancient buildings had been used. This appears also to have been the case in the construction of a neighbouring mosque, in the masonry of which several broken shafts of columns are inserted; similar blocks of marble and shafts of columns are built into the walls of private houses, both near the market-place, the Bezestan, and other parts of the town.

Vizir Keupri has been supposed to stand upon the site of the ancient Gazelon, the capital of the district Gadelonitis or Gazelotus, placed by Strabo between the mouth of the Halys and the district of Saramene which contained the city of Amisus. I am, however, rather inclined to believe that it falls within the boundaries of the district of Phazemonitis, the situation of which is so well described by Strabo.† "It remains for us to describe those parts of "Pontus which are between this country (viz. Comana and "its dependencies) and that of the Amiseni and Sinopians, "and extending to Cappadocia, Galatia, and Paphlagonia. "Beyond the country of the Amiseni, as far as the Halys, "is the Phazemonitis, to which Pompey gave the name of "Megalopolis, making a settlement near the village of Pha-"zemon, which he called Neapolis. Now Gazelotus and the "district of Amisus form the boundary of this country on the "north, the Halys to the west, the Phanarœa to the east,

* Mr. Ainsworth, who visited Vizir Keupri in 1838, two years afterwards, copied this inscription, which is given in the Geographical Journal, vol. ix. p. 259; but he has left out the sixth line, which has completely destroyed the sense of the passage.

† Lib. xii. c. iii.

"and my country of Amasia, by far the largest and richest "of all, limits it on the remaining side. That part of the "Phazemonitis which is towards the Phanarœa is bounded "by a very large lake called Stiphane, full of fish, and "surrounded by rich and fertile pastures."

Every feature of this description can be recognised in the surrounding country, but whether the antiquities of Vizir Keupri mark the site of the representative of Phazemon or Neapolis, or whether they have been derived from the neighbouring hot-baths of Cauvsa, is uncertain.

I here saw for the first time, in the market-place, several carts laden with large blocks of rock-salt, brought from the neighbourhood of Yeuzgatt, but I could not learn the name or situation of the mine. The soil of the plain which overlies the limestone and schistose rocks consists of blue and yellow marls, and clay interstratified with sand and loose conglomerate. The clay contains large masses of selenite or crystallized gypsum; the same was afterwards observed by Mr. Ainsworth further west in great abundance.

Vizir Keupri contains about a thousand houses. The inhabitants live chiefly on the produce of their lands and the gardens in the neighbourhood, and on the manufacture of a coarse muslin which is sent to Tocat to be printed. I had observed several looms in different houses, but could not ascertain their number. A little cotton is also grown in the district. The Turk in whose house I lodged was a man of property and of high estimation in the place; and, with more true civility than most of his countrymen, soon came to see if I was comfortably settled, and instead of obtruding himself upon me uninvited, remained in another room, with the tatar and interpreter, until I sent to request he would come and smoke a pipe with me; and yet until very lately he had been governor of the place. The treatment he had met with is but too characteristic of the government and country to which he belongs. Vizir Keupri is dependent upon the Mutzellim of Amasia, to whom the governor formerly paid 60 purses or 300*l.* for his year's tenure

of office. The price was subsequently raised to 100 purses, which he had also paid, but last year he was called upon for 200 purses, or 1000*l.* Being a native of the place, and unwilling to pay so large a sum, which he must have extracted from the pockets of his fellow-townsmen by oppressive means, he declined any longer to hold the situation, and retired into private life. This system of selling offices, great as well as small, is one of the greatest drawbacks to the prosperity of this empire; for, although it may be an expeditious mode of collecting revenue, it is clear that but a small proportion of those 60 or 100 purses can find their way to Constantinople, the rest being absorbed by the wants of the Mutzellim of Amasia and by the Pacha of Siwas, who has purchased the chief government in the first instance from the Porte. Besides which, additional taxes are often arbitrarily imposed upon particular districts. Great complaints were made by the inhabitants of the high price of provisions; wheat cost 170 piastres the kilo, and oats 110: the kilo here consisting of 26 batmans of 6 okes each.* Meat must be an exception to the general rule, as beef costs 32 paras,† and mutton 60 paras the oke. Another cause of complaint was that the rediff, or militia, had been lately drafted into and incorporated with the army.

* The oke being $2\frac{1}{4}$ lbs., the batman equals $13\frac{1}{2}$ lbs., and the kilo 351 lbs. 170 piastres equalled at the then exchange 1*l.* 14*s.*, the piastre being equal to 2. $\frac{1}{10}$, or nearly $2\frac{1}{2}$*d.*; the price of wheat was therefore nearly five farthings per lb., or 46*s.* per quarter.

† 40 paras equal to one piastre, or $2\frac{1}{2}$*d.*; 32 paras equal to 2*d.*, for $2\frac{1}{4}$ lbs. of beef.

CHAPTER XX.

Leave Vizir Keupri—Hot springs of Cauvsa—Ladik—Stiphane Palus—Sonnisa—Plain of Phanarœa—The Junction of the Iris and the Lycus—Boghaz Hissar Kaléh—Herek—Road to Niksar—Reach Niksar, anc. Neocæsarea—Its position and description—Probable site of Cabira—Road from Niksar to Tocat—Gumenek, anc. Comana Pontica—Reach Tocat—Copper Foundery—Considerations on Reform in Turkey.

MONDAY, August 1.—Vizir Keupri to Ladik eight hours. It was near seven before we started. About a mile and a half from Vizir Keupri we began slowly ascending a narrow valley between low and undulating hills, and soon crossed a small stream flowing towards the north. At half-past seven there was a fountain on the right, and near it many fragments of columns and hewn blocks, some of which were built into the walls of cottages near the road side, having probably been brought from Vizir Keupri. As we advanced, the hills were covered with privet, but the furrows and ridges which we could detect beneath the vegetation were proofs of former culture. We continued ascending towards the S.S.E. until a quarter after eight, when we reached the top of the ridge, where porphyritic and trachytic rocks protruded through the surface. From thence, descending a wooded ravine by a winding road for two miles, we entered a sylvan valley, watered by the Staular, or Istaular Chai, flowing rapidly over its rocky bed from a high range of mountains to the S.W. Its course is here due east for several miles; but it afterwards turns N.E., and then N., falling, as I was informed, into the Kizil Irmak near Bafra. The wooded mountains to our right extending from east to west were at a distance of about four miles, the lofty peak called Yan, or Iyan Kaléh, which I had observed bearing S. 40 W. from Vizir Keupri, being one of the highest points of the range. I was now told that there were some ruins on the summit, which

may be the remains of Sagylium, the name given by Strabo to a fort in this neighbourhood.*

The rocks which formed the northern or left bank of the river consist of volcanic peperite, and a decomposing trachyte, containing numerous angular fragments of other trachytes, varying much in colour and hardness. I observed no appearance of stratification, but the variations of colour rather indicated an inclination to the N.E. Leaving the valley of the Staular Chai on our left, we crossed another low range of hills, consisting chiefly of sand and gravel, and entered a rich valley, watered by a stream flowing towards Cauvsa. Passing the village of Sousanji, and crossing the stream, we followed its course until we reached the village and baths of Cauvsa, half way between Vizir Keupri and Ladik. Here must be the θερμὰ ὕδατα τῶν Φαζημωνιτῶν, described by Strabo†, and to which he attributed great medicinal virtue. The place now consisted of some ruined buildings of Byzantine character, and a few shops and wooden sheds; while the sick population of the neighbourhood were living in huts made of sticks and branches on the hill side, their wet bathing clothes hanging out to dry on every branch and bush around them.

In the wall of the mosque were three Greek inscriptions, but written in such a barbarous character, on so bad a stone, and so ill placed, that I found it impossible to decipher them; they were all sepulchral. The other buildings were the baths, apparently of Byzantine construction; and higher up the hill one which bore marks of the Saracenic style, called the refectory of a Turkish medresséh, or college, the ruins of which covered a considerable space of ground below the baths. This college belonged to the Softa, a kind of monkish or religious order existing throughout Turkey, being a branch of the Ulemah; they were formerly a powerful and numerous body, but have lately been reduced. The baths are now little visited; about 30 families only being there, besides a few in the neigh-

* Lib. xii. 560. † Ib.

bouring villages, and some rich Turkish ladies from Tocat, Amasia, and other large towns. During the day time I was unable to visit the hot bath while the women were in possession, but I went in the evening, accompanied by Hafiz Agha, who, in his zeal, insisted upon carrying the light: notwithstanding this, he contrived to walk into the almost boiling water, tumbling in headforemost with the candle; his shouts and screams alone told me where he was, while the darkness into which we were thrown prevented my being of any use to him. The bath is built over the principal source, the thermometer rising to 125° Fahr. in the mouth of the pipe through which the water flowed into the bath. I did not observe any igneous rocks in the immediate neighbourhood of the village.

Tuesday, August 2.—Cauvsa to Ladik four hours.* After descending to and crossing the stream from Sousanji, we ascended another valley, watered by a much larger river, called the Sousacham Chai, which, flowing from the N.E., joins the Cauvsa stream, and then falls into the Iris below Amasia. About a mile and a half from Cauvsa we ascended the hills, leaving the road to Kavak and Samsun on our left, while a distant range of hills called Kara Dagh bore E. by N. Ascending a lateral valley S.E. by E. for two miles, we reached the village of Giaour Kieui, from whence, as our Suriji had lost his way, we had to cross a ridge of hills into another parallel valley, which we ascended for several miles. On the summit of these hills extensive forests of young oaks stretched to a considerable distance; a few old fir-trees were still standing amongst them, and the ruined stumps and roots of many more showed that they

* The following list of distances was obtained here and at the last halting-places:—

	Hours.		Hours.
Cauvsa to Amasia . . .	8'	Ladik to Amasia . . .	6
Cauvsa to Ladik . . .	4	Ladik to Somisa . . .	12
Cauvsa to Marsuvan . .	4	Vizir Keupri to Samsun .	18
Cauvsa to Cavak . . .	8	Vizir Keupri to Boiavad .	18
Cavak to Samsun . . .	8	Vizir Keupri to Oranjik .	12

were the predecessors of the now flourishing oaks. This apparently spontaneous succession of vegetable life, by which a first growth of trees, when cut down, is succeeded by trees and plants of a different kind, has been frequently observed in the forests of North America.

Emerging from these woods, where we a second time lost our way, we crossed an open corn country sloping gently towards the north, beyond which we again found ourselves in a wooded district. Our direction was generally E.S.E., along an excellent road through flourishing woods of oak and fir, interspersed with wild pear and cherry trees, as we gradually approached the centre of a mountainous district, which forms the western limit of the Iris and its tributaries below Amasia. These mountain-chains were covered with forests of fir, in many of which however the axe and the resin-burner had committed great devastation. At half-past nine we had entered a small plain, which appeared to have been once an extensive lake, surrounded by wooded hills, which on the right rose into lofty mountains, and from which we descended by a stony road into the plain of Ladik, extending ten miles from E. to W., and varying from two to three in breadth. Its western extremity contains many natural clumps of fine wood in the midst of rich pastures, which, with the surrounding wooded hills, afford every variety of picturesque and park-like scenery. A ride of nearly two miles along the plain in a S.E. direction brought us to Ladik, or Iladik, a small and miserable place, but called a town, because it possesses a royal mosque with two minarets. It is situated at the foot of the low hills which form the southern boundary of the plain, behind which another and a loftier range rises towards Amasia, called Ak Dagh. The hills immediately behind the town extend from E. by N. to W. by S., and consist of almost vertical beds of semi-crystalline black and white marble, resting upon thick-bedded hard brown sandstone, breaking into rhomboidal masses. They are traversed by numerous deep ravines, but my search for organic remains was unsuccessful.

The town contains about 300 houses, with two mosques, one of which is remarkable for two tall and graceful minarets. A portion of it, which is called a Tekiyeh, appears to be very old, and from the imperfect information of the Turks, I learnt that it was built by a celebrated Daoud Pacha of Constantinople, in honour of Fetik Sultan Mahmoud II., and that it is still called the mosque of Sultan Mahmoud II. In the outskirts of the town is another small Tekiyeh, or shrine, an octagonal building with two marble columns in the portico, having a subterranean vault, the entrance to which is closed by a large stone.

The weather had been cool for several days, and so overcast that since leaving Boiavad I had been unable to obtain a glimpse of the sun. The thermometer to-day at one P.M. was only 67°; at half-past six P.M., 59°; so that a fire was not unwelcome in the evening; an extraordinary thing in Asia Minor on the 2nd of August; in the evening we had a drizzling rain. I understood from the Agha that a small lake full of fish existed in the plain, two hours to the east, called Boghaz Kieui Ghieul. It occurred to me that it might be the Stiphane Palus mentioned by Strabo;* and it lay on my way to Sonnisa, where I expected to find considerable remains. The Agha also gave me the itinerary of a route by Niksar and Tocat, instead of returning to Amasia direct from Sonnisa.† I was also told that the river in the plain flowed eastward into the lake of Boghaz Kieui; the appearance of the country made this a matter of doubt, but I had no opportunity of deciding the point.

Wednesday, August 3.—Thermometer at five A.M. 57°. We started from Ladik at half-past six, my own horse and Suriji having taken the direct road to Amasia. The road led nearly due east, winding along the southern edge of the

* Strabo, xii. p. 560.

† The following was the route he gave me :—

	Hours.		Hours.
Ladik to Sonnisa . . .	12	Niksar to Tocat . . .	9
Sonnisa to Herek . . .	6	Tocat to Tourkhal . .	8
Herek to Niksar . . .	6	Tourkhal to Amasia . .	12

plain, which was partly arable and partly pasture, and round which were said to be 24 villages dependent on the governor of Ladik. Amongst the underwood on the hills I observed in many places and in abundance the azalea pontica. Four miles from Ladik we approached the marshes, which extend to some distance round the lake of Boghaz Kieui, the name of which is derived from a small village on the northern side of the plain. At half-past eight it was only a quarter of a mile off on our left, and did not appear to be more than five or six miles in circumference; but the ground about it was very marshy. At nine no water was visible on the left, the whole plain being overgrown with weeds, rushes, and marsh grasses; but, on advancing only a few yards from the road into the grassy plain, I found that the whole country was under water, which gradually increased in depth. In former times the lake seems to have been much more extensive, but it is probable that the bed of the plain, particularly the bottom of the lake, has been gradually raised above its former level by the growth and rapid decay of vegetable matter, and the accumulation of detritus and soil washed into it from the surrounding hills. Its appearance convinced me that it must be the Stiphane palus of Strabo; but I was at a loss where to look for the ruins of the fortress called Cizari, or Kizari, which he describes as a royal residence, and places on a hill above the lake. There was no ruined castle near, or any hill commanding it, except the rocky range which separated the district of Amasia from that of Ladik, and which I did not ascend. It might perhaps have stood upon a lofty limestone rock which rose behind the town of Ladik, and which would have formed a fine position for an ancient fort; unless the similarity of names might induce us to place it near or above the modern village of Kiz Oglu, about three miles to the east of Ladik.

As we were leaving the shores of the lake we met several cart-loads of wood descending from the saw-mills in the hills on our right; the trees are cut into planks about

twelve feet long and one wide, the price of which is five paras the plank—the price in Ladik being ten paras. At half-past nine we crossed a stream, called the Kirpedjik Sú, flowing from the S.E., from a village of that name; and having reached the extremity of the plain, I rode round its eastern shore to ascertain whether any river ran from it in that or a N.E. direction, and was soon convinced that though several small streams run in, no water flows out of it on that side. Consequently, if the information of the Turks at Ladik, that the river flowed through the plain from west to east, is correct, the lake can have no open outlet to carry off the water constantly poured into it, which must therefore escape by subterranean channels, or katabothra. But everything is against this supposition; the shores of the lake itself, the hills around, and the evident fall of the valley towards the west, besides the apparent course of the rivers which we crossed yesterday morning, prove that the waters of the lake must flow out at the west end, and that therefore the river of the plain must flow from east to west.

At length, quitting this interesting but secluded plain, we ascended the hills to the S.E., covered with elm, hornbeam, and beech; to the left were also many fine fir-trees, the sawing of which into planks was the chief business at the mills we had passed. From the summit of this ridge we descended in a S.E. direction, through picturesque and grassy glades, skirted by magnificent forests, until we reached a stream called the Sepetli Sú, which gradually increased in volume and importance as we followed its picturesque and rocky valley for the remainder of our day's journey, beyond which it falls into the Iris above Sonnisa. After descending nearly three miles along the stream, we reached a narrow pass or gorge, called Sepetli Boghaz, formed by a mass of green'sh-brown trap, highly crystalline, but in a very decomposing state, and containing elongated crystals of felspar, the protrusion of which through the secondary strata has been one of the leading causes of the

elevations, contortions, displacements, and tiltings of the surrounding beds. Lower down the valley the dip of the strata was towards the S.E., instead of S.W. as near Ladik; this anticlinal or perhaps quâquâversal dip has also been caused by the protrusion of the above-mentioned igneous rocks. The beds here consist of compact grey limestone, associated with schistose rocks, while blocks of a hard conglomerate, containing numerous small pebbles of quartz, are in the valley, having fallen from some over-lying formation. A mile farther we quitted the valley and entered the hills to the left, to reach a village where we were to halt for the night. At twelve we passed the miserable village of Distek Kieui, and then proceeded over an undulating country, dotted with stunted oak-trees, to Sepetli Kieui, where we arrived soon after one; having on our right a rich plain below us, while a barren ridge of limestone rocks formed the northern boundary of this fertile vale. On reaching the village we found only women; all the men were engaged in getting in their crops; even the tatar, who had preceded the party, had gone in search of some of the male population, and until his return we were exposed to a burning sun. The thermometer at two P.M. was at 83° Fahr. In about an hour a high wind got up from the N.E., and the thermometer fell to 75°.

The only konak which we could obtain was the portico and interior of the mosque, a dilapidated wooden building about one hundred yards from the village, where I remained under the shade of the portico during the day, but was obliged to get inside at night, although besides the open windows the wind was rushing in at a thousand holes, and the floor was covered with pease, vetches, &c., drying for seed. Towards evening it was an amusing sight to see the men and cattle returning from their work and pasture; and whilst the latter were assembled on the green before the mosque, the young girls, who scarcely ever appeared outside their houses, were running about with red petticoats over their loose trousers, and a white handkerchief

on their heads, collecting and driving in the cattle to their respective stables. This village, with its lands and territories, is a chiflik belonging to Osman Pacha, having been acquired by his father when a Dere Bey, and for which the inhabitants pay him a certain rent, while the lands of the neighbouring villages belong to the inhabitants themselves, and for which they only pay the usual contributions and taxes.

Thursday, August 4. — We started from Sepetli a few minutes after six, and for upwards of six miles descended the valley S.E. by E., always keeping near the banks of the stream; the valley became gradually much wider, the hills lower and more cultivated, walnut and plane-trees flourished in the plain, and by means of careful irrigation a good crop of Indian corn was ripening on the ground. At a quarter after eight we left the stream flowing S. by E. through a narrow opening in the hills into the valley of the Iris, and crossed in an easterly direction an open corn country, sloping towards the S.W., and then descended gently to the village of Sonnisa, situated on the hills which form the N.W. boundary of the plain, in which the junction of the Iris and the Lycus takes place two hours to the east of Sonnisa. There can therefore be no doubt that this plain is the ancient Phanarœa mentioned by Strabo; which is now divided into four districts or cantons, viz. Herek, Tashova, Sonnisa, and Carai-oka, but it generally goes by the name of Tashova. The course of the Iris as seen from hence is from S.W. to N.E.

My expectations of finding ruins at Sonnisa were again disappointed, an old Turkish bath still in use, a mosque of ancient date almost in ruins, and a nondescript stone building with fragments of columns lying about it, but evidently of Turkish construction, constituting the boasted antiquities of this place; but I was told that there were some in the valley below, where the united streams of the Lycus and the Iris flowed out of the plain, which were called Boghaz Hissan Kaléh; but I feared they would not prove to be Eupatoria or

Magnopolis. I was also positively assured that no ruins whatever existed in the plain itself, which is probable, for there was little or no wood to conceal them. The whole plain belongs to Hadji Oglu, one of the former Dere Beys, who resides at Herek. I determined, instead of returning to Amasia, to follow the route given me by the Agha of Ladik, and to visit Boghaz Hissan Kaléh on my way to Herek and Niksar.

In answer to my inquiries at Sonnisa, where I was delayed some time for want of horses, I was told that the best cultivated land in the plain produced seven or eight fold, and the price of wheat was twenty piastres the kilo, which here consisted of sixteen batmans. Strabo, in his description of the Phanarœa, calls it ἐλαιόφυτον πεδίον;* now no olives grow there in the present day, whether cultivated or wild; and from its elevation and position I should doubt whether they had ever flourished in this plain. I shall have occasion to mention another district to which Strabo has applied the same epithet, equally inappropriate at the present day; I am therefore inclined to think that the geographer merely intended to say that it was a fertile plain, producing in abundance the most useful fruits.†

Although we remained at Sonnisa until noon, the continued cloudy state of the sky prevented my obtaining a meridian altitude of the sun. At mid-day we descended into the plain, having on our left a rocky wall of mountains consisting of trachyte in a state of decomposition, and on the right the narrow prolongation of the hills which formed the southern boundary of the Sepetli valley. Having reached the plain, we

* Strabo, xii. p. 556.

† The following list of distances was given me by the owner of the house where I halted:—

	Hours.		Hours.
Sonnisa to Amasia . .	12	Sonnisa to Samsun . .	24
Sonnisa to Niksar . .	12	Sonnisa to Charshambáh .	18
Sonnisa to Herek . . .	4	Sonnisa to Tashvoa . .	4
Sonnisa to Tocat . . .	14		

It will be seen that these distances generally agree well with the positions on the map.

continued three miles due east along the foot of the hills on our left, while on the low marshy ground to the right the wild vines grew luxuriantly round the knotty limbs of the willows, beside which were tamarisks and agnus castus, and on drier ground towards the hills a few wild pear-trees.

Soon after one we reached the banks of the Iris, and lost some time in looking out for a spot where we could ford the stream. At length the Suriji ventured in, a little way above its junction with the Lycus, and with some difficulty we reached the opposite shore. We had then to ford the Lycus flowing from the S.E., in order to descend the valley to Boghaz Hissan Kaléh; this we effected, leaving the baggage to await our return. The remains of several piers marked the site of an ancient bridge, below the junction of the two rivers, and at the commencement of the pass. Here, according to Strabo, we might expect to find some traces of the ruins of Eupatoria or Megalopolis, built in the centre of the plain of Phanarœa, and at the junction of the rivers.* Nothing can be more correct than Strabo's description of this part of the country and the rich plain of Phanarœa; but I looked in vain for the remains of an ancient city, and we proceeded down the valley in a northerly direction along a road overhanging the river, and in many places hewn out of the solid rock. On reaching the Kaléh or castle, situated on a strong and insulated hill in the middle of the valley, and to which we ascended by a steep and winding road, I soon ascertained that it was not of very ancient date; so after a short delay we retraced our steps, and, having again forded the Lycus, crossed the plain for eight or nine miles in a S.S.E. direction to the Cassaba of Herek, where I was again disappointed on finding no traces of antiquity. The road led occasionally close to the banks of the Lycus, where we disturbed some pelicans, which rose out of the marshes, with a strange uncouth appearance. It is probable, from the great variety of terraces in the plain, which

* Strabo, lib. xii. c. 111.

rises gradually towards the south, that both the Iris and the Lycus flowed at some former period through channels different from those which they now occupy, and that their junction may have been to the south of the point at which they now meet. On this supposition the very great denudation of the northern part of the plain during the last centuries will account for the removal of every vestige of the town of Eupatoria. On the other hand, numerous beds of gravel and sand in horizontal layers extend along the N. and N.E. limits of the plain, the débris of matter washed down from the surrounding hills, and which have been accumulated opposite the mouths of the larger valleys, forming detached ranges and hills.

It was impossible to look on this rich and level plain, surrounded by lofty mountains, without being convinced that it was the site of an ancient lake, which had been drained by some convulsion which had broken up the mountain barrier between it and the plains of Charshambáh; but I was surprised to find that the Turks themselves had a tradition that the plain was once a lake or sea, navigated by large ships. They pretended that formerly a great chain was hung across the gorge below the bridge, and our guides pointed out to what parts of the rock it had been attached. From this chain were suspended smaller ones, to which pieces of leather and skins were fastened, by which the waters were kept in to form the lake. I could not learn at what period this event was supposed to have taken place; but, divested of the fabulous part of the narrative, it is remarkable that a people so unimaginative as the Turks should have conceived such an idea. As we approached Herek I was much struck with the cultivation and care bestowed upon the fields and gardens near the town, and with the fine oak-trees growing in the hedge-rows.

Friday, August 5.—This was bazaar or market day; and as we rode through the town on our way to Niksar, we saw exposed for sale many decently manufactured four-legged chairs. I had never seen them used in the houses, and it was

long before I ascertained the purpose to which they were applied by the peasants. Corn is threshed in Asia Minor, as in some other parts of the East, by dragging a heavy board stuck full of sharp flints over the straw, on which, in order to increase the pressure, a man or a couple of boys generally stand; but, besides the difficulty of keeping their balance, this is a fatiguing operation, and therefore they sit on a chair whenever they can procure one.

We left Herek at seven, proceeding along the plain for four miles until we again reached the banks of the Lycus. Much tobacco is grown in this neighbourhood, although the greater part of what is consumed comes from the province of Djanik. About two miles from the town we met a large party of fine-looking young men, collected from the surrounding country, on their way to Herek; from these a certain number of recruits were to be selected. At half-past eight we reached the western extremity of the Phanarœa, and ascended a ridge of rocky hills, which separates it from the plain of Niksar, and through which the Lycus has forced its way, flowing along a winding valley between steep and wooded banks covered with pine and oak-trees, and an undergrowth of arbutus, andrachne, kiziljik, and other beautiful shrubs. The road led for several miles in an E. by S. direction, along the left bank of the river, by a narrow path hollowed out from the overhanging rocks. The hills were chiefly limestone, but trap and other igneous rocks rose up in several places, the probable causes of the elevation and disruption of the ridge, which appears to connect the chain of Paryadres to the N.E. with those of Lithrus and Ophlimus.

At half-past nine we quitted the bed of the river flowing through a steep and precipitous ravine, to ascend the limestone hills, the contorted stratification of which was very distinct, and crossed a succession of hills and deep ravines partly wooded, until at half-past ten we reached the village of Kutchuk Kouera on our left, whilst a rising hill on our right was covered with the remains of a much larger

village. I was here looking out for some indications of the site of Cabira, which is placed by Strabo at 150 stadia from Eupatoria or the junction of the Lycus and the Iris, towards the range of Paryadres. No ruins were known in the neighbourhood, but, as we were getting within the range of that distance, I could not help theorizing on the resemblance between the words Kouera or Kobera and Cabira.

At 11 h. 20 m. we descended into the plain of Niksar, and immediately crossed the Lycus by a lofty stone bridge without a parapet. The bridge itself was of Turkish or Byzantine origin, but constructed with the fragments of more ancient buildings. I found the inscription No. 68 on a large marble block worked into the foundation. The form of some of the letters and the words prove it to have been subsequent to the Roman conquest. Leaving the bridge, we crossed the plain in a direction E. by S. towards Niksar, which appeared a-head of us at the foot of Mount Paryadres, the river flowing close to the road or trending away towards the centre of the plain on our right. The hills on our left were from one to two miles distant, the limit of cultivation on their sloping sides distinctly marking the extent of the lacustrine deposit, and of the detritus brought down by mountain torrents, which could be traced filling up all the sinuosities of the valleys. At a quarter after one we commenced a gentle ascent towards the town, built on the detritus brought down from the vale of Niksar into the plain, which, like that of the Phanarœa, bears incontestable proof of having also been a great inland sea or lake; a sort of Lake Superior, separated from the Phanarœa by a ridge of lofty hills, which have been worn through by the continued action of a powerful river. Boulders of trap and other igneous rock form the chief ingredient of the fertile talus which surrounds the plain, from which they are collected to serve as boundaries to the adjacent corn-fields. Indian corn is grown in the plain towards the Lycus, wherever it has been possible to apply irrigation.

As we entered the town I saw several remains of ruined

mosques and other edifices in the elaborate style of Persian or Saracenic architecture; and a broken sarcophagus near a fountain bore some traces of an inscription which I was unable to decipher. From the road on the north side of the town we overlooked the flat-roofed houses and gardens situated at the mouth of the valley; the castle, which is of considerable extent, stands on the brow of the hill to the north: it is a long and straggling mass, built at different periods, but in its present form is chiefly Turkish. In the gateways of the outer and inner walls were many large blocks of stone which had evidently belonged to older buildings, on two of which I found unimportant fragments of inscriptions—ΛΑΜΠΡΙΑ and ΥΝΤΙΑ. Amongst the walls near the summit of the castle were the remains of a handsome façade, containing three arches of good workmanship, apparently Roman, and belonging to an ancient edifice, on the ruins of which the modern fortress has been built. At a neighbouring fountain was a bas-relief representing a contest of animals, or rather two lions devouring a goat; and let into the wall close by were four stones with very rude sculptures, two of which represented animals, and two men, one of whom was apparently a blacksmith. The castle was supplied with water by an aqueduct, part of which is still in use, the ruined portions being replaced by wooden pipes.

There can be no doubt that Niksar is the modern representation of Neocæsarea, but its position is ill laid down in the maps, although upon the high road from Erzeroum to Tocat. It has been placed too far to the south, and at too great a distance from the junction of the Lycus and the Iris. In Cramer's map this distance is sixty miles, and in Arrowsmith's forty-seven; the former, therefore, naturally placed Cabira, which is stated by Strabo to have been only 150 stadia from Eupatoria, between that city and Neocæsarea. This, however, is impossible, for Niksar is not more than twenty-one miles from Herek, near the supposed site of Eupatoria; I have, therefore, no hesitation in

supposing Niksar to represent Cabira as well as Neocæsarea; an idea which also occurred to Mannert,* although not admitted by Cramer. Cabira is stated by Strabo† to have been situated at the foot of Paryadres on the banks of the Lycus, and to have contained a palace of Mithridates, besides a water-wheel and mines, and was afterwards called Sebaste, or Sebastopolis. Now, although Niksar is twenty-one miles from Herek, and nearly twenty-seven from the junction of the Lycus and the Iris, there is no spot between it and the junction of the two rivers where traces exist of any ancient city. This supposition is rendered highly probable by the fact, that the two places, Cabira and Neocæsarea, are nowhere mentioned by the same author. Cabira was named Diopolis by Pompey, and subsequently called Sebaste by Queen Pythodoris. This substitution of names took place before Strabo wrote, who in his turn was unacquainted with the name of Neocæsarea; this occurring only in writers of a still later period. Pliny says that the Lycus flowed by it; and it is also mentioned by Christian writers, who describe it as a metropolitan see; so that, being the most recent name, it alone has been handed down to posterity, and is that by which it is now known.

Moreover, the situation and remains of Niksar bear a striking resemblance to what we read of the palace and abode of Mithridates, and its position would make it a place of great importance in all the military operations which took place during the Mithridatic war in this part of the Roman provinces. A palace or a castle well supplied with water, and commanding a narrow and fertile valley with a rich and luxuriant plain, will fulfil all the conditions necessary to establish the locality of the regal residence of Mithridates.

Another place of importance mentioned by Strabo as in the neighbourhood of Cabira was Cænonchorion, which he describes as a fortress 200 stadia from it, being a pre-

* Mannert, Geogr., tom. vi. p. 11, p. 473.

† Lib. xii. cap. 3, p. 556.

cipitous rock, having a fountain at the top, and its base washed by a deep river, and one of the strongholds of Mithridates, situated in a most inhospitable district. With regard to this place, I learnt from my host that on the road from Niksar to Siwas, and about fourteen hours from Niksar, there is a remarkable high and perpendicular rock, almost inaccessible on all sides, which from its great height is called Ghieuldiz Tash, or Rock of the Stars, and from the summit of which flows a stream of water, with a river called Ghieuldiz Chai at its base. This description agrees perfectly with the account of Strabo; and even the distance from Niksar or Cabira is not far wrong, for the road is described as bad and mountainous, so that the hour cannot be estimated at more than two miles.

Saturday, August 6.—Niksar to Tocat, nine hours. As we left the town we descended to the plain along the bed of the torrent, and amongst many well-watered gardens. Our course was S.W., and we soon forded the Lycus in two branches flowing through the centre of the plain, and then continued for three or four miles across it in the same direction; many parts were still wet and swampy, and rice was growing in a few places; the air is said to be unhealthy, and Niksar itself is not free from agues.

Shortly after eight we reached some low hills, and passing between them entered a deep and wooded valley in those which form the western boundary of the plain of Niksar, probably the Colopene district of the ancients. At half-past eight we passed the village of Denekse on our right, and changed our course to west. As we ascended the scenery became every moment more picturesque, the rocky cliffs on either side towered to a greater height, the hills were clothed with finer timber, and we crossed and recrossed a small stream, which, near the above-mentioned village, had been led into numerous channels for the purpose of irrigation. The rocks consisted of limestone and argillaceous schists, dipping to the south at a considerable angle.

At half-past nine we reached an elevated plain, having two lofty ranges of mountains at some distance on either side (probably the Lithrus and Ophlimus of the ancients); that to the right, which extended to the south of Herek, was called Kemer Dagh, and that on the left Oktap Dagh, from the name of a small village on our right. This plain forms the watershed between the Lycus and the Iris; and on its summit, notwithstanding its height, I observed both Indian corn and cotton. At 11 we were descending by an excellent road between wooded hills into the valley of the Iris. This road is the principal, if not the only, communication by land between Constantinople and the northern parts of Persia and Armenia, and was very superior both in appearance and in width to most of those which I had seen in Asia Minor.

At half-past 11 we saw, for the first time, the Iris, here called the Tocat Sú, flowing from the E.S.E. After halting for a meridian observation we descended into a barren and uncultivated plain, through which the general direction of the river was S.W. From thence the road led round a point, where the river has forced a passage through the rocks which separate this plain from that of Gumenek. The river on our left was flowing rapidly, and carrying down large quantities of firewood for the use of Tocat; several men were employed in keeping it afloat, and watching it where it had grounded in the shallow parts of the river. This was almost the only instance I had seen amongst the Turks of a readiness to avail themselves of the powers of nature, and to turn them to their advantage.

Six miles lower down my attention was attracted by a Turkish burial-ground, containing several Hellenic-looking blocks of stone, and by a low hill covered with ruins near the river, which I turned aside to examine, and found several fragments of marble architraves and friezes built into the walls. One building, better preserved than the others, was remarkable, being of a square shape, and consisting of eight or nine apartments arched over, and

made of bricks and rounded stones. There is little doubt that they mark the site of an ancient city, although the structures which now exist belong probably to a later period. At the foot of the hill were the remains of a bridge apparently of Roman construction: the two extreme arches were perfect, the centre had been destroyed and subsequently repaired with wood. It is called Gumenek Keupri, and the place itself Gumenek, not Komanak, as it is written by Cramer.* Imperfect as are these remains, they are sufficient to point out the site of Comana Pontica, which is described by Strabo as being above the Phanaræa, in a rich and fertile plain watered by the Iris, which flowed through it from east to west, above the plain of Daximonitis.† We also learn from a passage in the writings of Gregorius of Nyssa, in the Life of Gregorius Thaumaturgus, that Comana was not far from Neocæsarea: he calls it indeed πολιν ἀστυγειτονα; Neocæsarea being at that time κορυφη πασης τῆς περιοικιδος, the head of the whole neighbourhood.‡

About a mile to the west of Gumenek is a large mass of marble near the road, bearing marks of having been detached from the high hills above. It is a cube of about 50 feet, and had been hollowed out to form two ancient sepulchres, over the entrance to one of which is carved a rude representation of the façade of a temple. Tavernier, who passed it on one of his journeys into Persia, has also described it, though rather vaguely, and says, on the authority of the Christians of the neighbourhood, that St. Chrysostom made it his retreat during his banishment, when he lay on the bare rock. The range of hills to the right consist of a semi-crystalline limestone, associated with beds of argillaceous shale; but after passing this sepulchral boulder I crossed a spur or ridge of trap or greenstone, intersected by numerous veins

* Asia inor, vol. i. p. 309.

† Strabo, lib. xii. cap. iii. pp. 547—560.

‡ Gregor. Nys. in Vit. Thaumat., p. 561. Wesseling ad Hieroc. Synecd., p. 703.

of chalcedony. Proceeding in a W.S.W. direction we forded the Iris three miles below the ruins of Gumenek; and, considering what a much smaller body of water it is than the Lycus near Niksar, it is surprising that it should have preserved its name after the junction of the two rivers. Leaving the banks of the river and winding round the shoulder of a steep hill, we ascended a lateral valley to the south, in which Tocat is situated, and soon came in sight of the ruined castle picturesquely situated on a steep ridge of limestone rocks to the west; after which the whole town bursts upon the sight at once: its appearance is very striking, the flat roofs of the houses appearing above the gardens in which they are embosomed, and extending up three or four valleys which diverge in various directions.

The name of Tocat is endeared to the recollections of the Missionaries as the place where Henry Martyn breathed his last, on his return from Persia, his constitution having been worn out by his unremitted exertions. I was not aware at the time of this circumstance; but it was not without feelings of great interest that I entered Tocat, celebrated as it is for its commercial enterprise, and as the chief seat of Turkish industry in this part of the empire. The town itself is mean and dirty, the houses are mostly built of mud-bricks dried in the sun, and which soon crumble to pieces; the streets narrow and dirty, and the bazaars, with the exception of the Bezestan, which is a solid stone-built edifice are mean and ill supplied. The amount of the population was very differently stated: one person mentioned 8000 houses; another, a chavasse of the governor, said 8000 Turks and 10,000 rajahs, Greeks and Armenians. The Armenians are numerous, and have from 1200 to 1500 houses, but I should doubt the population exceeding 20,000.

Sunday, August 7.—I visited the church which the Armenians have lately built in the centre of the town; it is a large and handsome building, containing several daubs, dignified with the name of pictures. I also called on the

venerable Principal, whom I found in conference with several of his brother-priests, all of whom were much disappointed at finding I was only what they called a "Milordo," and not a hakim or physician. Tocat contains several fine old khans, substantial buildings of burnt brick and stone, but those of later date are, like most of the houses, built of mud. There are 15 mosques, one of which, called the Eski Djami, is a neat building in the Saracenic style, and very old. The mosque itself is circular, with two small wings, and a large portico built of marbles of various colours.

The town is bounded to the west by a high range of limestone hills, and is commanded by two abrupt and almost perpendicular peaks, consisting of crystalline marble overlying beds of argillaceous schists, some of which are extremely hard and fissile, and break into large slabs, which are used as gravestones by the Turks. The view from the most southern was very extensive, overlooking the whole town, which, with its khans, its mosques and minarets, its gardens and orchards, filled up the space formed by the junction of several valleys, and up which they partly extended. But what struck me most was to see so large a city, situated in the very centre of mountains of the finest marble, built entirely of earth and sun-dried bricks, and wood.

Traversing the Armenian quarter and the bazaars, I reached the northern rock, which is crowned with the ruins of a castle of the Lower Empire. Its steep and craggy pinnacles, surmounted with fragments of ruined battlements and turrets, produced a picturesque effect; and on the southern scarp were several natural and artificial caverns, some of which may have been sepulchral. Half-way up the rock I found one of those remarkable flights of steps, penetrating into the centre of the mountain, like those at Uniéh Kaléh, but so broken up that it was impossible to descend without ropes and a light. My guide said it had

served the purpose of procuring water, but it rather appeared to have been an ancient entrance, both for the sake of greater defence, and on account of the steepness of the rock. The view was as remarkable as from the other point; it overlooked also the valley of the Iris, with its gardens and orchards. Amongst the productions of these, the most deserving of notice are the pears of Tocat, which for deliciousness of flavour and softness are unequalled even by those of Angora, whose fame reaches to Constantinople. To the S.E. of the town the road to Siwas was seen winding up the hills: Fontanier, who arrived here from Siwas, says that a mile before reaching Tocat he crossed the Iris on a wooden bridge; but the Iris is in the plain a mile and a half to the north, so that he appears to have mistaken the stream which runs through the drains of the city, and serves to irrigate the gardens, for that river.

Monday, August 8.—I visited the copper-foundery; the metal, which is brought in a rough state from the mines of Caban Maden, beyond Siwas, twelve or fourteen days' journey from Tocat, is here re-cast before it is sent on to Constantinople. It is, in fact, melted twice at this place: first, to purify it from the dross with which it comes from the mining district; and, secondly, to cast it into square cakes, in which state it is conveyed to the capital. The conduct of the Turks with regard to the administration of this establishment is another proof of their total ignorance of the principles of finance, in consequence of which the government is imposed upon, and the people oppressed. The copper is conveyed by the inhabitants, without any remuneration, from village to village; the charcoal consumed in the foundery is provided by the neighbouring villages equally without pay, or at so trifling a cost as to be of no consequence, and the labour is all compulsory: after which, though it scarcely costs the government one piastre, the sale price is thirteen piastres per oke. The villages which furnish these gratuitous supplies of charcoal and of labour are generally exempted from the payment

of the public taxes, but that does not relieve them from extraordinary contributions, or the capricious extortions of a Pacha.

Another instance of misrule which came to my knowledge at Tocat proved the existence of that fruitful source of complaint, which has been denied by the advocates of Turkish regeneration. I mean the monopolies which are avowedly sanctioned throughout the country. An Armenian arrived here about eight days ago, who, for a payment to the Porte of 30,000 piastres or 300*l.*, had purchased the sole privilege of buying, roasting, and selling coffee in the town and its neighbouring dependencies. All the retail and wholesale coffee merchants have been ruined, and obliged to sell their stock, whether great or small, to this favoured monopolist. Attempts are made to justify the job by alleging that the inhabitants are benefited by obtaining the article at a reduced price. But two hundred thousand okes of coffee are consumed annually in Tocat, on which the monopolist can make a profit of two piastres per oke.

According to the usual practice in Turkey, the Mutzellim of Tocat is said to pay 250,000 piastres, or 2500*l.*, annually to the Pacha of Siwas for his situation. No good can ever accrue to Turkey from any measures of administrative reform, until this system of selling places and permitting the purchaser to make the most of his bargain shall have been entirely done away with. When the Turkish government shall adopt the practice of paying fixed and adequate salaries to the local governors and other persons employed under it, then, and not till then, may some improvement in the revenues of the country be looked for. At present, except in Constantinople, the Porte never pays any of its agents, but allows them to make what they can over and above the sum they have paid for their situations; the same system is also observed by those who hold subordinate offices

Here also the usual complaints, respecting the ruinous

conditions on which the Menzilkhana is held, were repeated. The town of Tocat pays 130 purses, or 650*l.*, annually to the Menzilji for the support of the Menzil, but even with this assistance he is ruined. The constant communication between Constantinople and Reschid Pacha in Kurdistan had lately been one great cause of loss, many horses having been killed by the rapid rate at which the tatars travel.

Trifling as the above instances of maladministration may at first sight appear, and as they would really be if only insulated cases, they are so incorporated with the social existence of the Turkish nation, that they become objects of great importance, and must always be taken into account, when the question of Turkish reform is to be considered. At present it is too evident that the expectations which have been held out on this subject by writers, who from long residence in the country ought to be better acquainted with the Turkish character, must be disappointed; and every one must feel that the Turks themselves are as yet incapable of that high moral energy and perseverance in the path of duty, which are essential to the accomplishment of any moral or political regeneration.

The future capabilities of the Turkish nation were a frequent source of reflection to me during my solitary rides; but the bigotry and intolerance of Mahometanism ever presented themselves as an insuperable bar to their moral or political improvement, as well as to any reform in respect of their religion itself; for such is the virulence of their bigotry that the bare idea of a discussion or a doubt as to the merits or infallibility of Mahometanism will drive the whole population to insurrection. It may perhaps be said that Mahometanism is as open to reform in the present day as Catholicism or Popery was in the 15th century; but it must be recollected that infidelity and atheism had not then raised their heads or joined in a league with the philosophical dogmas of self-styled illuminati. Man had not then learned to live without religion, or to sneer at the truths of revelation; the necessity of religious motives was

admitted, and they had their effect on almost every act of human life. When, therefore, the absurdities and inconsistencies of Popery were laid bare, its fall did not necessarily entail indifference to religion; and man was not only willing, but anxious, while throwing away the unprofitable husk in which truth had been concealed, to retain more firmly the living kernel of a purified and wholesome faith.

But the times are altered; the independent spirit of the age, proud of the increased powers of human reasoning, has spread over all a tinge of scepticism and of infidelity; and, having destroyed the superstitious terrors of an ignorant age, has filled the human mind with vain-glory, predisposing it to trust in its own resources and aspirations. Thus, no sooner are the false doctrines of a superstitious creed overthrown, than pride and arrogance rush in, and persuade the mind unoccupied by any fixed principle that religion is absurd, and all religious doctrine useless. The Turks are now in this predicament, and the only religious change they are likely to undergo is from Mahometanism to atheism: it has been frequently remarked in various parts of Turkey that those who have been the most eager supporters of the reform measures of Sultan Mahmoud are bad Mahometans, and careless observers even of the outward forms of their religion; but in this they have made no step towards the truths of Christianity, and have only changed the precise formalities of Mahometanism for the vague uncertainties of scepticism.

CHAPTER XXI.

Leave Tocat—Kaas Ova, the Daximonitis of Strabo—Course of the Iris—Tourkhal—Its castle—Ruined village of Khan Kieui—Road to Zilleh, anc. Zela—The Mound of Semiramis—Site of Cæsar's victory—Meeting with gipsies at Ashkaler—Plain of Amasia—Reach that city—Its position—The Acropolis—Tombs of the kings—Inscriptions—Turkish ruins—Turkish legend.

TUESDAY, August 9.—Tocat to Tourkhal eight hours. Leaving the town, we passed by the Waiwoda Khan, a good substantial building, and an old Mahometan shrine built in the Saracenic style, resembling the Eski Djami. Then turning to the west we skirted the base of the castle-hill, while rich gardens extended on our right to the opposite side of the valley. At the foot of the hills to the left was a Turkish burial-ground; but without the lofty cypress trees of Smyrna or Constantinople, it was neither picturesque nor striking. One mile from the town we reached the banks of the Iris, and rode for two or three miles along its right or south bank, where we observed in several places the oxen treading out the corn, and the peasants strictly following the scriptural injunction of not muzzling them. As we advanced, the valley widened to an extensive plain, while the low hills in front, which formed its western limit, were lost in the distance, and in the hot and yellow atmosphere of an Eastern summer. This tint seemed formed by the reflection of the numerous corn-fields, the burnt-up verdure of the plain, and the colouring of the barren hills.

At nine we forded the Iris, and continued down the plain here called Kaas Ova, or Plain of Geese. It is the Daximonitis of Strabo, through which he describes the Iris flowing from east to west between Comana and Gazioura; it is skirted on both sides by numerous villages, generally

situated at the mouth of a ravine or valley. It was curious to trace the line of cultivation along the edges of the plain, marking the extent of alluvial soil, or following the sinuosities of the valleys. In several places pebbles and boulders of trap and trachyte were mixed with the diluvium, pointing out the existence of those rocks amongst the hills above; and I invariably observed that, when the diluvial detritus consisted of the decomposing fragments of such substances, the cultivation was more productive, and extended higher up the valley, than when it consisted of the comminuted fragments of limestone or calcareous rocks.

Soon after ten, about seven miles from Tocat, whilst watching some pelicans, I suddenly came upon the ruins of an ancient bridge over the Iris. One pier only showed substructions of Roman work, consisting of large blocks of marble; the rest of the bridge, and some walls on the south bank of the river, were of a much later period. The plain was covered with a handsome species of capparis,* trailing along the ground, having the stems armed with numerous long thorns, and covered with beautiful flowers; the Greeks pickle and eat the pods of this and some other species; the seeds, which were red, in a pulp of the same colour, were not yet sufficiently ripe to gather them with much hope of success; those which I brought to England failed.

Soon after eleven we saw a tumulus on our right, and presently reached a burial-ground containing several broken shafts of columns, on one of which was the inscription, No. 69, inverted, and so barbarously written that I could only decipher a few letters. A mile further we passed another tumulus near the road side at the end of a ridge of gravel, stretching down from the hills on our right, and nearly opposite the village of Bazar Kieui on our left. Six miles further we turned N.W., after winding round a lofty limestone rock on our right, in the face of which were several caverns, and entered the valley of Tourkhal. Here the

* C. spinosa or C. pulcherrima.

Iris changes its course from west to north, agreeing with Strabo's description of that river near Gazioura, where it leaves the plain of Daximonitis.

At half-past one the ruins of a deserted village covered the sloping ground on our left, beyond which we entered a picturesque plain surrounded by high and precipitous hills. Tourkhal is situated in the centre of this plain, with the Iris flowing through it; but the most remarkable feature is the castle-hill, which is completely insulated, and rises to a height of 600 or 700 feet, as represented in the accompanying sketch.

At three we reached the mud-built cassaba of Tourkhal, said to contain 800 houses, and situated between the river and the castle-hill; and I was glad to take refuge from the sun in an empty house, instead of having my tent pitched by the river side in a garden of Indian corn. The irrigation of the plain is effected by means of large water-wheels, which are turned by the strength of the current, and raise a small portion of water to the height of their diameter. I afterwards visited the ruins of the castle, apparently of a late period; the gateways, however, consisted of large blocks of stone, having an air of antiquity, and the lintels, sideposts, and threshold, were each formed of a single block; the rock on which the castle stands is a semi-crystalline limestone, of which other insulated masses rise above the plain in several places. Here also a subterranean passage or flight of stairs leads into the centre of the mountain, the steps of which near the top were tolerably perfect, and I attempted to descend; but they gradually became so much obliterated that it was impossible to preserve a footing on the smooth surface sloping at an angle of 45°. After descending about fifty steps, contrary to the advice of my guide, who talked about Sheitan, it was with difficulty that I effected my retreat.

There can be little doubt that the castle of Tourkhal occupies the site of the ancient Gazioura, which is described by Strabo as being near the spot where the Iris, after

flowing through the rich plain of Daximonitis, turns towards the north.* Gazioura is described as an ancient royal residence, and is by some supposed to be identical with Talaura, one of the strongholds of Mithridates in Pontus. According to other accounts Tocat is supposed to stand upon the site of Talauri, or Talaura, said to have been near Comana Pontica, and which is described by Appian as the fortress where Mithridates kept his most precious jewels and other effects, and where these were found by Pompey.† I could hear of no such place in this neighbourhood as Azurnis, which is mentioned by Cramer.‡

Wednesday, August 10.—Having heard that some ruins existed in the plain, near the bend of the Iris, at a place called by the Turks Khan Kieui, one of which was called an Eski Khan, I rode back this morning about seven miles S.S.E. to see them. The principal building was a Turkish mosque or bath, around which were many large blocks of stone, and the foundations of houses extending to some distance, interspersed with heaps of stones, marking the site of a village or cassaba, which has derived its modern name of Khan Kieui from the ruins of what is called a Khan. The people had no tradition or recollection of its former existence. The four sides or piers of a square building are still standing, from which a vaulted roof or dome appears to have sprung, in the construction of which many red Roman-looking bricks have been used.

Notwithstanding my early return to Tourkhal, it was one P.M. before I could procure horses to go on to Zilleh, four hours distant. The Turks, seeing me start for Khan Kieui, had no idea of my leaving Tourkhal before evening, and no horses were ready. They hinted too, but without effect, that it would be more agreeable to travel by night, in order to avoid the heat, in which opinion Giuseppe also coincided. After winding through the town we crossed the

* ἐπιστρέφει πρὸς τὰς ἄρκτους. Strabo, lib. xiii. c. iii. p. 547.

† Appian, Bell. Mithr., c. cxv.

‡ Cram. As. Min., vol. i. p. 306.

Iris by a stone bridge, and traversed the plain to the S.W. for nearly three miles, when we entered a narrow valley, still keeping in the same direction, until, after crossing the crest of a low range of hills, we came upon a plain sloping towards the S.E. At half-past three, leaving a village called Gürlatch on our left, we were travelling over an extensive plateau stretching from the hills on our right to the plain on the left, to which the ground fell rapidly about half a mile off; while towards the hills were many vineyards in a high state of cultivation. At length we came in sight of the black hill of Zilleh, the ancient Zela, rising in front of us above the level of the plain, and crowned with a Turkish or Byzantine fortress; while the rest of the town, situated lower down, only became visible about a mile farther. Its singular and insulated appearance immediately reminded me of the description of Strabo,* who says that it was built upon the mound of Semiramis. At half-past four, after descending a gentle slope, we reached the town; the governor, Seid Bey (an ancient Dere Bey in this country), would not hear of my going to a private house, and insisted upon my being his guest. His family, and even himself, were formerly possessed of great wealth and power, his possessions extending over the districts of Zilleh, Amasia, Siwas, and Tocat; although now deprived of all feudal power he is still immensely rich, and keeps a numerous retinue of servants, horses, and attendants. His konak was one of the most sumptuous and well-furnished which I had seen.

The town of Zilleh contains 2000 houses, which, with the exception of a few Armenians, are all inhabited by Turks. Accompanied by my interpreter and two chavasses, I proceeded to the castle in search of antiquities and inscriptions. Raised upon the foundations of an old Byzantine fortress, the modern castle is situated upon a remarkable hill, which rises abruptly from the plain near the centre of the town, and occupies a very commanding position.

* Strabo, lib. xii. c. iii. p. 561.

Near the gateway large blocks of marble and fragments of broken architraves have been built into the wall; in other parts three large Ionic capitals are similarly appropriated. I found two unimportant inscriptions in the citadel, Nos. 70 and 71. The former, built into the wall, and only to be seen by scrambling into the roof of the mosque which is built against it, was difficult to decipher; the other was within the court of the Agha's harem, into which I was admitted after the keeper had entered to send away the women. Here also, although I did not see it, a subterranean passage is said to exist, leading from the summit of the castle-hill to a fountain in the middle of the town, cut through the solid rock. The fountain itself is a square well, built of large blocks of ancient construction, at the bottom of which flows a rapid stream of clear cold water, of the source of which the Turks are ignorant. After passing through the town it escapes into a large pool to the south, and thence into the plain. The only other vestiges of antiquity which I saw were several fragments of columns before the gate of the Agha's konak, one of which was large and fluted. Yet in former days Zela was a place of considerable importance, as appears from the account given of it by Strabo, in whose time the province Zelitis belonged to Queen Pythodoris.*

Thursday, April 11.—Zilleh to Amasia eight hours. We left Seid Agha's konak at half-past seven, and on quitting the town ascended the bed of a torrent, now almost dry, to the N.W., for about two miles. Gardens and vineyards extended on each side, until we reached the gorge from which the scanty stream issued, where a winding road led along the bottom, enclosed between steep and rocky cliffs. The subterranean fountain before mentioned is probably supplied from this rivulet, a portion of which, besides what is drawn off for the purposes of irrigation, is absorbed by the sandy soil, from whence it may escape into the under-ground channels which communicate with and

* Strabo, xii. c. iv. p. 562.

feed the fountain. At half-past eight we were still ascending the narrow ravine, which is not without considerable interest, as being the spot described in Cæsar's Commentaries where the great battle took place between him and Pharnaces, king of Pontus, the result of which was announced in the three celebrated words, "Veni, vidi, vici." Pansa, in the description of the Alexandrine war,* describes a deep ravine about three miles north of the city, the opposite sides of which were occupied by the contending armies, before Cæsar's victory, and which closely agrees with the natural characteristics and features of this pass.

After leaving the ravine and crossing another plain we ascended a range of hills in a northerly direction, and continued for several miles over a bleak and barren country, consisting of limestone of the same formation as that of Tocat and Zilleh. Vegetation was poor and scanty, and not a tree to be seen, except a few stunted oaks, hardly a foot or two above the ground, and occasionally a few junipers and pines. At length, on reaching the edge of the limestone escarpment, we overlooked a wooded and picturesque country into the valley of the Iris. This was about 12 miles from Zilleh, when, quitting the high lands, we descended the mountain, sloping rapidly to the N.E., by a stony road, through thick woods of oak and fir, and a luxuriant vegetation.

Presently, through an opening in the rocky hills before us, we caught a distant view of the plain and gardens of Amasia, eight or ten miles off to the N. by W.; a mile farther we had a picturesque view up the valley of the Iris on our right, flowing from east to west between lofty cliffs, the northernmost of which had been violently broken through, thus affording a passage for the pent-up waters to escape from the country above, and draining the fertile plains of Daximonitis and Tourkhal.

Soon after twelve we again reached the banks of the Iris, flowing through a fertile valley, and irrigating nu-

* A. Hirt. Pansa, De Bello Alexandr.

merous gardens and mulberry-plantations on each side by means of gigantic water-wheels. An accident detained us in this place for two or three hours: the suriji having dismounted to arrange a strap, all the baggage-horses attempted to lie down, and one of them, whose load was evidently too great for him, made such violent exertions in consequence of the suriji's flogging, that, when he at last got up, one of his fore legs was found to be broken. I proposed shooting the poor beast, but the suriji and Hafiz would not hear of it, so, shifting his load to the suriji's own horse, we left him in the field, and, after fording the Iris, proceeded to the neighbouring village of Aksaler. While waiting here for another horse, I was surprised, on entering a small cottage or Oda by the way side, to find sitting with half-a-dozen Turks, two women, who, as they showed no disposition to conceal their faces, I at first concluded must be Kurds; they were, however, gipsies, as well as several of the men. As in Europe, they are here also itinerant, their chief occupation being the manufacture of sieves. After we had had coffee, and they had been allowed to empty my tobacco-bag, one of the women, who had some little pretensions to good looks and fine eyes, was persuaded to treat us with a song and then a dance in the true Zingani style. The song was loud, noisy, and nasal, not improved by the rude accompaniment of a most unmusical tambourine. The dances of these gipsies I had often heard described, but had never seen; they resemble those of the Spanish gitanas, and consist chiefly of a slow waltzing movement, the great merit appearing to consist in the strange and difficult contortions of the body. The huge bundle of clothes too which the dancer wore rather took away from any grace she might otherwise have shown; yet, with her long, black, flowing ringlets, swarthy complexion, and Turkish dress, the exhibition was picturesque, and, from its novelty, not unpleasing.

After procuring a fresh horse we took leave of the gipsies of Aksaler, and soon left the Iris on our left, while we

crossed the end of a low spur of hills, from whence we descended into the rich plain of Amasia, having a range of hills which formed its eastern boundary on our right, while the river about a mile off, winding between gardens and mulberry-plantations, offered a pleasing prospect of comfort and fertility, through which our road led for some distance under the shade of hedge-rows and fruit-trees. The plain extends several miles to the west, but is not cultivated beyond the limit of irrigation; in its southern part, the Tchoterlek Sú, the Scylax of Strabo, and said to come from Siwas, falls into the Iris; and perhaps the Tchoterlek Sú may take its rise in the high mountains in the neighbourhood of Siwas; but the river which flows through that town is the Halys.

At half-past four we rejoined the Iris, where I again observed many large water-wheels, having generally a dam or weir thrown across the river immediately above or abreast of them, in order to confine the water, and bring the whole strength of the current into one spot; the wheels, although of great size, and I saw some whose radius exceeded 16 or 18 feet, were generally of very slight construction. Many of the hedges as we approached Amasia were simply formed of layers of mulberry twigs after they had been stripped of their leaves by the silk-worms, kept in their places by a few large stones. By degrees the rocky hills on each side approach so close, that the river two miles above Amasia flows through a narrow glen hemmed in between precipitous cliffs, where the road is cut along the mountain side, on the right bank of the river; about 20 feet higher up are the remains of an aqueduct, formed with considerable labour in the solid rock, or carried along the face of the cliff by artificial channels. It appeared to be the work of ancient times, and has been long useless.

The valley soon widened into a plain, when we came in sight of the Castle and Acropolis of Amasia, situated on the summit of a lofty rock on the opposite side of the river, the banks of which were fringed with gardens, wherever its waters

could be raised for the purpose of irrigation. At half-past five we entered the town, winding through the narrow streets, admiring the remarkable caves in the rocks on the opposite side of the river, immediately under the castle, which are doubtless the tombs of the kings described by Strabo.* Several Saracenic buildings, either in ruins or used as mosques, line the principal street through which we passed; many of the houses are built of stone, which, combined with its picturesque situation, gives the town an air of great superiority over most others in Turkey. The population is said to consist of from 3000 to 4000 Turkish houses, 750 Armenian, and 100 or 150 Greek.

I remained three days at Amasia, but a much longer time might be well employed in examining the antiquities of the town and castle, in exploring the interesting localities in the neighbourhood, and in visiting the silver, copper, and salt mines near Marsuvan. In Amasia itself the objects most worthy of notice are the Acropolis, the ancient walls, and the tombs of the kings; but perhaps the town derives its greatest interest from being the birthplace of Strabo, whose account is so clear and satisfactory that I shall venture to introduce it here before describing the present state of the city.

"My native town† is situated in a deep and large valley "through which flows the river Iris. It has been provided "in a surprising manner, by art and nature, for answering "the purpose both of a city and a fortress. For there is a "lofty and perpendicular rock which overhangs the river, "having on one side a wall erected close to the bank where "the town has been built, while on the other it runs up on "either hand to the summits of the hill. These two are con-"nected with each other, and well fortified with towers. "Within this peribolus (or enclosure) are the royal residence "and the tombs of the kings. But the summits have on each "side a very narrow neck of land, about five or six stadia

* Lib. xii. c. iii. p. 560.

† Ib. Cram. Asia Minor, vol. i. p. 302.

" in height, as you ascend from the river and the suburbs. " From this ridge to the summits there remains another sharp " ascent, about a stadium in length, which it would be im- " possible to force. And there a watercourse is carried up " under ground, two mines having been cut, one towards the " river and the other towards the ridge.* Two bridges are " thrown over the river, the one from the town to the suburb, " the other from the suburb to the outer country, for the " mountain which overhangs the rock terminates at the point " where this bridge is placed."

My visit to the citadel was very satisfactory, inasmuch as I was able to recognise all the details and features so graphically described. As there is no way of mounting the perpendicular cliff directly from the town, it is necessary to make a considerable circuit to the east, and to ascend by a winding path behind, which leads to a narrow ridge running north and south, and connecting the Acropolis with the mountains to the north. This circuitous route explains the passage which states the height of the citadel to be five or six stadia, meaning the length of the road by which alone the summit can be reached. Near the commencement of the ascent I found two inscriptions cut upon the solid rock, but could only decipher them with difficulty, returning on each of the following days at the hour when the rays of the sun produced the most favourable light.†

On the Acropolis itself I was surprised at finding very few remains of ancient architecture; nothing now exists but a portion of the walls and towers, and a subterranean passage. The greater part of the walls now standing are Byzantine or Turkish, but at the very highest point, corresponding with what Strabo calls the κορυφαι, are considerable remains of two Hellenic towers of beautiful construc-

* I have translated this passage differently from what is given in Cramer's work, but more literally and at the same time more closely in accordance with the local features.

† See Appendix, Nos. 73 and 74.

tion, and to which he alludes in the words πεπυργωμεναι παγκαλως. The κορυφαι were not, as I had at first imagined, two distinct points connected by a narrow intermediate ridge, but one only, from which two narrow ridges extend, one to the north, and the other to the east, which last terminates abruptly close to the river. The angles of the walls and towers of Hellenic masonry are admirably executed; each stone is slightly convex on its outer surface, the centre projecting three or four inches beyond the plane of the joints; the masonry too is very regular, each course being sixteen inches thick.

But the object of greatest interest is the under-ground passage above alluded to, evidently the συριγγες of Strabo, closely resembling those subterranean flights of stairs which I had seen in several other castles similarly situated on rocky eminences, as Uniéh, Tocat, Tourkhal, and Zilleh. Whether intended merely for procuring water, or to serve as secret sally-ports to the fortress, there can be no doubt of their antiquity and Hellenic origin. There seem to have been two of these covered passages or galleries at Amasia, one of which led from the κορυφαι or summit in an easterly direction to the ridge, and the other from the ridge into the rocky hill in a northerly direction. The former, however, is not excavated in the rock, like the latter, but is built of masonry above ground, yet equally well concealed. Having seen so many of these places I determined to descend this one, and to explore its recesses, having procured a guide and lights, and being told that a fountain of excellent water existed at the bottom. My opinion of its antiquity was at first rather shaken, by finding the entrance, sides, and roof arched over with bricks, but after descending about 20 feet I reached the old entrance, formed of Hellenic masonry. The descent, which was extremely steep, the steps being either worn away or filled up with mud and gravel, commenced rather inauspiciously, by my sliding down 15 or 20 steps at once. Here I observed that the

sides were in several places built up with Hellenic blocks in the same style as the entrance; and having at length reached the bottom, at the depth of about 300 feet, I found a small pool of clear cold water, the wall round which was also of Hellenic masonry; it appeared to have been originally much deeper, and to have been filled up with stones, and may therefore have been one of the wells so destroyed by Pompey's order; or perhaps those which are described by Strabo * as being destroyed by Pompey in the war against Arsaces, were of this description, as he applies the same word ὑδρεῖα in both cases.† The rock through which this has been cut is a hard limestone, but it sometimes passes through beds of soft friable schist, supported by walls where required. I may add that the subterranean passages already described at Uniéh and Tourkhal so closely resemble this of Amasia, that there can be no doubt as to their antiquity; and this increases the probability of those places having been some of the strongholds of Mithridates.

Immediately below the citadel, to the south, are the celebrated tombs of the kings, βασιλέων μνήματα, as they are called by Strabo; they are five in number, three to the west and two to the east. The steep face of the rock has been artificially smoothed to give more effect to the peculiarities of their situation. A steep path from one of the old bridges near the centre of the town leads some way up the hill, but the tombs to the west can only be approached by a narrow path cut through a small grotto, and along an open gallery scooped out of the perpendicular face of the cliff, and protected by a low parapet of rock which has been left, while a similar passage with a flight of steps leads from one to the other. The farthest of them has a small chamber hollowed out in the centre, which is completely detached from the surrounding rock by a narrow passage round it, varying in breadth from two to four feet; it is detached also at the top, and thus appears to

* Lib. xii. p. 560. † Lib. xii. p. 561.

stand in the middle of a large grotto. Here the path terminates abruptly, and the tomb itself appears never to have been completely finished. The others are built precisely upon the same plan, which resembles the Aïnol Maharâ outside the town, described by Sir K. Porter in his Travels from Persia; but they have no inscriptions. Under the three smaller tombs to the east are considerable remains of the old Greek walls, and a square tower built in the best Hellenic style. These walls can also be traced up the hill towards the west, and are evidently those described by Strabo, as forming the peribolus or enclosure, within which were the royal tombs. A few smaller caves of simpler style and character have been excavated near the town, and traces of quarries are also visible near the foot of the hill.

There are four bridges over the Iris, within the limits of the city, the first or uppermost of which, towards the west, is modern, and of stone; the second, immediately below the tombs, is also of stone, but very old, and apparently Roman, and has sunk considerably since its first construction; the third is of wood, opposite the Mutzellim's konak, where the river changes its direction and flows towards the north; the fourth is of stone, half a mile lower down, and at the extremity of the town.

Below this spot the plain again widens, and being well irrigated is covered with productive gardens and mulberry-plantations. Silk is one of the staple productions of Amasia, which produces annually upwards of 50,000 okes, the price being about 120 piastres per oke, or 10*s*. 6*d*. per lb. I visited in this part of the town a mill lately established near the river, for making a coarse woollen cloth, almost resembling felt, and used for clothing the Nizam troops. The machinery is very rude, but, as a commencement of manufacturing industry, deserves encouragement; the whole process of spinning the thread, weaving the cloth, and milling it with great wooden hammers, is performed upon the premises by means of a water-wheel fixed in the river,

which, by the additional operation of raising a small quantity of water to the top of its diameter, causes a sufficient fall to turn a machine for spinning the coarse thread. I have observed before that near the entrance of the town we passed the ruins of several Turkish buildings; they are said to be the tombs of the early Sultans who conquered the country from the Byzantine Greeks; they are built in the Saracenic style, and deserve more attention than I could bestow upon them. In the same street are the ruins of an old medresseh or college, the front wall of which is constructed of fragments of ancient cornices, friezes, architraves, &c., while three long stones, with fragments of Greek inscriptions in large letters and deeply cut, form the sides and architrave of the entrance.*

We know nothing of the early history or foundation of Amasia, but it must have been an important place during the dynasty of the kings of Pontus; and we learn from its numerous coins, that after the conquest of Asia Minor by the Romans, and during the whole duration of the empire, it bore the title of Metropolis of Pontus. Situated in a fertile country and near the frontiers of Armenia, it would be soon exposed to the ravages of the Persian and Saracenic conquerors, and to the still more destructive incursions of the Tartar and Turkish hordes, but it is only casually mentioned in the histories of the later Byzantine emperors.†

As an instance of diminished bigotry on the part of the Turkish rulers, I was informed that a Greek school had lately been established here, by permission of the authorities, the only one, with the exception of that at Bafra, in this part of Asia Minor. In general, even amongst the Greek population, their language is unknown and unspoken, the use of it being forbidden by the Turks, in order to keep down

* See Appendix, No. 72.

† Plin. vi. 3. Ptol. p. 125. Steph. Byz. v. Ἀμασεῖα. Hierocl. p. 701. Procop. Hist. Arc. c. 18. Procop. Æd. iii. 7. Nicet. Ann. p. 331. Leo Diacon. vi. 3. p. 59.

the rising energies of their subjects. The chief priest of the Greek Church called on me one day, and, in answer to my inquiries, stated that there were neither books nor manuscripts at Amasia, but that in the college at Cæsarea there was a large and excellent library, which might perhaps contain many manuscripts.*

The bazaars of Amasia are small and ill-supplied; I procured a few interesting autonomous coins from some Armenian jewellers; one of Dia, a seaport of Bithynia, and one of Pimolisa, which is rare, in a beautiful state of preservation, and remarkable for the perfect manner in which the harpa or hooked sword of Perseus is represented; this is a common type on the coins of several cities of Pontus, as the figure of Perseus with the head of Medusa, and a dead body at his feet, occurs on those of several cities on the coast, as Sinope, Amisus, and Amastria. I did not, however, obtain a single coin of Amasia itself, although those of the imperial series are not uncommon in the cabinets of collectors, and I subsequently procured several at Cæsarea.

One of the most disagreeable and yet striking sights frequent in this town is presented by the number and the horrid tameness of the large white vultures, which perform with alacrity and zeal the disgusting office of street-sweepers and scavengers. Roosting at night in the clefts and fastnesses of the mountains which surround the town, they pass the day either perched on the low roofs of the houses, watching for garbage, or, careering aloft in large and beautiful gyrations, soar for hours on their expanded wings, ready to pounce upon their meals. The Turks never molest them, but, appreciating their useful qualities, accustom them to approach their dwellings by throwing to them from time to time heads of fresh killed fowls and pieces of refuse meat.

* When I was at Cæsarea in the following year I was told that no MSS. existed there. In fact, the only old MS. I ever saw or heard of in Asia Minor was that in the cave of Tatlar.

I have already alluded to the aqueduct along the road side on entering Amasia, and which Fontanier mistook for the watercourse mentioned by Strabo. The Turks of Amasia have a tradition respecting its origin, which is no bad specimen of their talents and ingenuity in this way. The story goes that there once dwelt in this neighbourhood a rich and powerful young man of the name of Fer-hat, who was in love with a beautiful damsel of Amasia. He offered her marriage, which she accepted, on condition that he supplied her native town with water from a distant valley, and performed all the work himself. Undismayed at the magnitude of the undertaking, he immediately set to work, and to judge from the result, must have laboured hard for many a year. At length one day he met an old woman who, with true Turkish inquisitiveness, asked him what he was about; Fer-hat told her the story of his love, and that he hoped soon to have completed his task; whereupon she replied, that he might cease from his useless labour, as the maiden, who must by this time have passed her seventieth year, was dead. On hearing this he gave up his undertaking, and soon dying of a broken heart, was buried with the lady of his love on the summit of a neighbouring mountain.

CHAPTER XXII.

Leave Amasia—Extensive plain—Tchoterlek Irmak, anc. Scylax—Hadji Kieui—Achmet Bey—Village of Aur-hat—Tchaana—Tekiyeh—Tchorum—Ruined Castle—Inscriptions—Bigotry of the Inhabitants—Course of Rivers—Tekiyeh Hatap—Kara Hissar—Its lofty Rock—Euyuk—Remarkable Ruins—Alajah—Road to Yeuzgatt—Arrive there—Excursion to Nefez Kieui—Ruins at Boghaz Kieui, anc. Tavium.

MONDAY, August 15.—We left Amasia for Tchorum, distant eighteen hours, at half-past eight, and for the first three miles retraced our steps along the road to Zilleh; then turning to the west we crossed the Iris by a stone bridge, and ascended a low ridge of hills in which trap rocks had been forced up through vertical beds of schist. Descending from these hills into the plain of Amasia, we continued for about eight miles along its northern limits, at the foot of low hills, consisting chiefly of volcanic sand or peperite, occasionally stratified, and containing a few boulders of trap. From the hills above mentioned I distinctly saw the Tchoterlek Irmak to the south, issuing from a narrow valley and flowing towards the Iris. On the hills to the right the village of Bahglijah was half a mile off, and that of Zara a few miles further to the N.W.

This plain, like many others, bears evident proofs of having been a lake at some former period; and I could trace along its border the marks of ancient beaches, extending at the same level round all the sinuosities of the hills; in some places, indeed, two were visible, perfectly parallel to each other, and even more distinctly marked than the road itself. Many parts of this plain are still flooded in winter by the waters of the Tchoterlek Irmak, which is so swollen at that time that the bridge in the centre is impassable, and the river can only be crossed higher up, where it emerges from the hills.

Soon after one, and thirteen miles from the bridge over the Iris, we left the plain, and ascended a valley watered by a small stream which issues through a narrow gorge. Huge masses of rocks rose up through the surface on the opposite side of the valley, looking, at a distance, like the grey ruins of an ancient castle; further on I observed many more traces of beaches more or less parallel to each other, showing the existence of former lakes. Much of the land in this valley, which is chiefly arable, particularly where it widens out, was now fallow; there were also a few vineyards. The remains of watercourses along the hill side were not uncommon; cut for the purpose of irrigation, these had been long since neglected, and the crops were poor and scanty.

The extent of denudation, which must have taken place in this valley, was marked by several elevated table-lands on our right, the remains of a limestone deposit with which it had been once filled. Soon after four we passed the village of Baindir, half a mile off on our left, and at five reached Hadji Kieui, twelve hours from Amasia, and containing 300 wretched hovels. This is the chief place of a district, comprising twenty-five villages, in the government of Seïd Agha of Zilleh, and managed by his friend Achmet Agha, who pays 100 purses, or 500*l.* a-year, for his situation. This Achmet Agha was an European by birth, but I did not learn whether he had embraced the Mahomedan faith; though I should imagine he had, from his unwillingness to see me when in Seïd Agha's house, with whom he was then staying; he is also a physician, and served the celebrated Choppan Oglu in that capacity. The distance from Hadji Kieui to Tchorum is six hours; and the village of Tekiyeh, half way between the two, was said to contain some interesting antiquities, as well as that of Afhat or Aur-hat Kieui, one hour to the north of Hadji Kieui. I therefore determined to visit both these places on the following day, leaving the baggage to join me by the more direct and level road to Tchorum. The cold was

very severe, the thermometer having fallen to 60° Fahrenheit at six P. M.

Tuesday, August 16.—I started with Hafiz Agha to visit Aur-hat. Several columns were lying about or built into the walls of the houses; the village was surrounded with trees and well supplied with water. After descending into the plain, an hour's ride brought us to low hills on the north, where fragments of columns and blocks of variegated marble were lying among the shrubs and brambles, and near them the remains of substantial walls and vaulted substructions, said to be the ruins of an ancient church, though I saw nothing to mark the age, extent, or nature of the building; but in the walls of the mosque of Aur-hat, and at a neighbouring fountain, were several other large blocks of similar stone.

Leaving the village soon after eight, we proceeded along the northern slope of the limestone ridge, until we reached another village, called Tchaana, where after some search I found an inscription, No. 77, surmounted by a cross and nearly obliterated, on a large stone built into the wall of a very small mosque. Leaving Tchaana we crossed a low ridge of hills and descended into an open country sloping towards the north, when a ride of three miles due west brought us to the village of Tekiyeh. Here my attention was first directed to the mosque, a handsome building, but where I searched for inscriptions in vain. In front of a neighbouring khan was the handsome square capital of a column with acanthus leaves, and further on a sepulchral monument, the inscription of which was effaced, except the two concluding letters OI. I was then directed to the site of a ruined village, now ploughed over, two miles E. by N., where the inscription No. 78 was placed on its side over a fountain; and on my return I found another, No. 79, built into the wall of a house near the café. Both are well preserved, but are sepulchral, one being of the third century, and the other probably of nearly the same period.

We left Tekiyeh at half-past eleven, and presently entered a narrow gorge in a ridge of hills running N. by S. These hills consisted of dark-blue argillaceous shale intersected by many veins of calcareous spar; the shale is used by the Turks to form the flat roofs of their houses.* At twelve we reached the summit of the ridge and descended by a winding path through woods of stunted oak, juniper, and firs, into a wide valley watered by a small stream flowing W.S.W. Large herds of cattle were grazing on the hills, and seeking a scanty morsel from the burnt-up grass, amidst which a few stunted shrubs gave the only variety to the prospect. Looking at the course of the stream flowing nearly west, and apparently into the Halys, I considered the ridge from which we had just descended as the watershed between the Iris and the Halys, and therefore the natural boundary of the provinces of Pontus and Galatia; for in the early ages of the world, before the property of individuals was so defined as to mark the limits of different countries, we must suppose that natural features, as a river or a chain of hills, served for that purpose.

At one we rejoined the direct road from Hadji Kieui to Tchorum, and, leaving the stream on our left to flow into the plain of that name through a gorge to the S.W., we crossed the barren hills, and descended, by a steep ravine planted with vines, into the extensive and burnt-up plain. Not a tree was to be seen on the surrounding hills, the yellow stubble was glaring under the almost vertical sun, while the minarets and castle of Tchorum, of the same monotonous hue, appeared about two miles off to the W.N.W. The road for some way skirted the base of the hills on our right, consisting of thin-bedded sands and clays dipping towards the west, and containing small fragments and crystals of selenite, the same formation as that observed in the neighbourhood of Vizir Keupri, which is nearly in the same longitude; it is therefore not improbable that these localities are the eastern limits of the

* A similar material is applied by the Greeks of Syra to the same purpose.

great saliferous deposits of this part of Asia Minor, from whence the Halys undoubtedly derived its name. How far this great formation is to be considered secondary or tertiary, is still a matter of doubt, notwithstanding the recent attempts of Mr. Ainsworth to ascertain the geological features of the district.*

Soon after two we passed the ruined castle, and entered the town of Tchorum, a dirty scattered place interspersed with numerous gardens, and containing above 2000 Turkish houses. The bazaars were well supplied, and yellow berries, the produce of the neighbouring hills, were in great abundance. This place had never yet been visited by any European traveller, and many were the fierce and savage glances directed towards me by the bigoted inhabitants, who, to judge from the huge size and preposterous shapes of their turbans, did not appear disposed to approve of Sultan Mahmoud's reforms; I had nowhere yet seen such a variety of forms and colours.

At a fountain in the Agha's court-yard I copied the inscription No. 80, which had been brought from a ruined village near Tekiyeh, and then visited the castle, said to have been built by Sultan Suleiman several centuries ago. It is a rude quadrangular building, defended by many round and square towers, and standing on a rising ground to the S.E. of the town. I was surprised at the number of inscribed stones built into the walls, many of which had been purposely defaced and rendered illegible; a great variety of columns had been also used for the same purpose; on the inside a flight of steps, which leads up to the battlements, is built entirely of these columns laid transversely. The inscriptions are all sepulchral, some of them being surmounted with a cross, and all apparently subsequent to the introduction of Christianity.†

These inscriptions, although not of a classic character, prove the existence of a large town in this neighbourhood,

* See Journal of the Royal Geographical Society, vol. ix. pp. 264 and 267.

† See Appendix, Nos. 81—88.

which must have been converted to Christianity at an early period. This is the more interesting when we recollect that Galatia, within the limits, or at least on the borders of which Tchorum was probably situated, was one of the first provinces of Asia Minor which embraced the Christian religion. The Turks of Tchorum said that the inscriptions, as well as the columns and stones used in the building of the castle, came from a ruined place called Kara Hissar, on the road to Yeuzgatt. They added, that in their old chronicles neither the names of Tchorum nor of Yeuzgatt are to be met with, but that the country as well as the town was called Kara Hissar.

I determined to visit this place on the following day, not without hopes that it might prove to be Tavium; for it had been one of my objects in visiting Tchorum to ascertain how far it was probable that it occupied the site of that city, as suggested by Colonel Leake;* and I have detailed, in a short paper inserted in the Journal of the Royal Geographical Society,† the reasons which have satisfied me that Tchorum and Tavium are not identical. The mosque of Tchorum is a large and handsome building, first erected by Sultan Amurath; and restored by Choppan Oglu. It was the hour of evening prayer when I visited it, and I never saw so many devout-looking Turks preparing by ablution for their evening devotions; they did not at all appear to approve of my curiosity, and particularly when, in company with my tatar, I entered the door and looked in: the interior was handsomely decorated, a large circle, fifty feet in diameter, of coloured lamps hung down from the dome-shaped roof within six or seven feet of the ground, the effect of which when lighted must have been very striking.

In the evening I asked some Turks who were sitting smoking in the verandah outside my room, how long ago Sultan Amurath lived? They expressed the greatest

* Tour in Asia Minor, p. 311. † Vol. vii. p. 75.

astonishment at the question, not on account of the ignorance which it showed, but of the presumption in asking such an unanswerable question. The only reply they all gave was "kim bilir" (who knows), followed by the expressive sound of De——e——eh, signifying a long, long time ago!

Wednesday, August 17.—The thermometer this morning was as low as 50° Fahr. at six A.M. An old man, an acquaintance of the master of the house in which I lodged, came in, and as a matter of course wanted a cup of coffee, which he got, and then a pipe, for which purpose he came into my room, where they were kept, and selected one, which he deliberately prepared to fill; at this moment Hafiz Agha perceived him in my room, and instantly rushed upon him, caught him at the door, seized the pipe, which he nearly broke over his shoulders, and kicked him out with a volley of Turkish oaths, asking him what business an idle fellow like him had to smoke at that early hour of the day. To my astonishment neither the ill-used man himself nor the owner of the house appeared to take the slightest notice of the proceeding, so great is the influence and authority of the government tatars.

Soon after seven we left Tchorum, and crossed the plain in an oblique direction towards the S.W. This plain extends above twelve miles from N. to S., and three or four from E. to W., and is watered by a small stream which flows south, and then, as I now learnt, turns to the east, and falls into the Alajah Sú, which again falls into the Tchoterlek Irmak; thus I had not yet crossed the watershed between the Iris and the Halys. At a quarter after eight we approached the low hills to the west of the plain, which, consisting of calcareous marls and sands containing selenite, form the basin in which the alluvial beds are deposited horizontally. Many bagrakalas were flying about in coveys and in pairs on these undulating barren hills; and after passing a large fragment of a column stuck into the ground near the road, we entered another plain

opening to the west, the greater part of which served as pasture for the flocks of the Turcomans, who were encamped near its centre, and who, like the Kurds, dwell in the plains during the summer, but in the winter retire to their villages, which are generally, as in this part of the country, situated near their summer quarters. Their tents also resembled those of the Kurds, being formed of coarse black cloth made of goats' hair stretched upon poles; many flocks of sheep and goats were feeding near them, and on the hills at a distance the camels of the tribe were grazing on the thorny plants; they had no cattle or horses; the goats were very handsome, with long horns falling over their backs like those of the chamois.

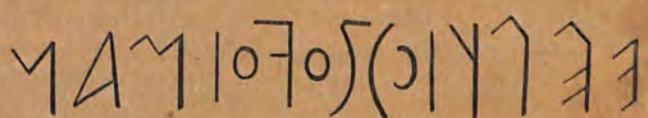
After crossing this plain in a S.W. direction we reached the mouth of a narrow valley between schistose rocks, partly covered with stunted oaks, which we ascended as far as the village of Tekiyeh Hatap. From hence Kara Hissar was nearly three hours off to the S.W.; and Hafiz Agha endeavoured to dissuade me from going there, saying that there was nothing to see, and that the road was impracticable for the baggage-horses. But when he found that I was determined to go without the baggage, and would not allow him to stop behind, he jumped on his horse and with the suriji started at a full gallop, which we kept up for nearly eight miles, over hill and dale, rocks and stony paths, until we reached the head of the valley, when the dark hill of Kara Hissar, with its remarkable pointed summit, appeared before us towering above the hills in front. The position of this insulated mass of trachytic rock, rising several hundred feet from the centre of a small plain surrounded by low hills, through which several valleys opened outwards in different directions, was very striking; it evidently had been a place of great strength and importance. The summit consisted of two peaks, distant from each other about 50 or 100 feet, one of which was quite inaccessible, while on the other, which was about

100 feet in length and 20 in width, the remains of walls and arches were proofs of its having once been fortified. A similar defence also extended round that part of the base which was most accessible.

At the foot of this hill were the remains of a considerable town, consisting of the massive ruins of four or five large buildings of rough stones, the outer casing of almost all of them having been removed or destroyed, and which were probably Turkish. One seemed to have been a bath, another a khan, and a third, of considerable extent, was called a mosque, and bricks, apparently Roman or Byzantine, have been used in their construction. It certainly was not Tavium, and I felt disappointed at not finding any traces of Hellenic ruins. On the low hills to the east was a high tumulus, which the Turks called Sangiac Tepe (Hill of the Standard), saying, that when Sultan Murad or Amurath marched against Bagdad, he ordered each of his soldiers to throw a handful of earth into a heap, on which he planted his standard while the army was encamped around.

While meditating on my disappointment and on the probable origin of the ruins around me, Hafiz Agha reported that he had learned from some peasants, that in the neighbouring village of Euyuk, about two miles off to the S.S.W., there were some curious old stones, in search of which I immediately started. On arriving there I found a Turcoman village, on the southern limits of which was a very curious monument of the oldest times. When I first saw the numerous rude and apparently shapeless stones, forming a kind of avenue, they reminded me of druidical remains, and I thought they might have belonged to the Gallo-Græci, but on further examination they proved to be of a different character. The ruins consist of a large gateway or entrance, facing the south, with part of a massive wall on each side; the two principal stones which form the posts are of gigantic size, being ten or twelve feet

high. On the outside of each is sculptured a monstrous figure with a human head, in a very Egyptian style, the body being a grotesque imitation of a bird, the legs of which terminate in lion's claws. The wall, which advances about fourteen feet on each side of the gateway, and then breaks off to the right and left, leaving a paved enclosed space in front of the entrance, has consisted of enormous blocks of Cyclopian character, but is now much ruined; yet on the lower course of stones, which are above three feet high, several figures, nearly of the same height, are rudely sculptured in very flat relief; the first stone towards the west represents children playing upon instruments, but too faint to be distinguished; the second represents three priests clothed in long robes; the third, rams driven to the sacrifice; and the last a bull, very rudely sculptured. Within the gateway, an avenue of large stones leads some distance into the village. A curious feature in this monument is, that on the inside of one of the high door-posts, a double-headed eagle has been sculptured, which, however, may have been a more modern addition. In front of one of the cottages in the village was a large square stone with the following inscription in very curious characters. Are they Phœnician or Phrygian,



Greek or Celtic? These remains acquire additional interest from some curious carvings, which Texier discovered on the rocks near Boghaz Kieui, only five hours from the village. As evening approached I was obliged, after making a hasty sketch, to return to Hatap before night set in, regretting not having come on here at once, as the roads and accommodation were much better than I had been led to expect. At Tekiyeh Hatap I copied the in-

scription No. 89, from a small sepulchral stone in front of my konak.

Thursday, August 18.—Tekiyeh Hatap to Alajah four hours. Our route to-day was nearly due south, ascending the valley, in which were a few tents belonging to the Turcomans of Tchorum. We started at seven, and for four or five miles passed through a succession of winding valleys, between schistose rocks varying much in colour and consistency, from argillaceous and compact to talcose, thinly laminated and soft, while the hills were slightly covered with oaks and junipers. After stopping a short time to geologize, I overtook my tatar and servants enjoying the spectacle of a gipsy dancing-boy: in appearance he was not above nine years of age, but in his step and manner there was the confidence, firmness, and decision of a much more advanced age. To his other accomplishments he added tumbling and posture-making, twisting his body back so as to make his head touch his heels in a most extraordinary manner. He was accompanied by two men, who sang a monotonous ditty, while one of them played upon a small stringed instrument, not unlike a guitar, the strings of which he touched with a quill.

At nine we reached the head of the valley, and found ourselves on an elevated plain, which produced corn in abundance, and a little flax. From it a small stream flowed both north and south, while low hills, partly cultivated, rose on the east and west. In twenty minutes we commenced a gradual descent into the plain of Alajah, following the course of a stream which falls into the Alajah Irmak. Corn grew wherever the ground was sufficiently level, but not a tree or blade of grass were to be seen to diminish the universal yellowness and dried-up appearance of the surrounding country. At ten I passed another small Turcoman encampment, with many flocks of sheep and goats; the roofs of their tents were made of goats' hair canvas stretched upon poles: the sides consisted of thin reeds or stakes fastened

together, and sometimes boughs, which, although closely intertwined, freely admitted the air. I did not see in this part of the country any of the low round dome-shaped huts used by the Euruques near Smyrna, and by some tribes of Turcomans in the interior; but occasionally I could almost have fancied myself in a more civilized country, when I saw their women let me pass unconcerned, instead of running away and hiding their faces.

As we descended I put up several plovers from the marshy ground near the stream; they were very tame, and never rose until I was within twenty or thirty yards of them. By degrees the valley widened, and we entered the plain of Alajah, the village of which, a few miles a-head, formed, with its mud-built cabins and two or three trees, the only exception to the dreary aspect of the plain. We reached it soon after eleven, and were obliged to remain there all day, partly for want of horses, and partly in consequence of my servant's illness.

Friday, August 19.—The waters of this plain flow to the east and fall into the Tchoterlek Irmak. At seven we started for Yeuzgatt, eight hours, keeping for two miles along the top of a low ridge. At eight we descended into a narrow valley, near a village called Seid Ouseu, crossing and recrossing the stream, and passing through a narrow gorge in the limestone rocks, which had not yielded to the effects of weathering in the same way as its associated schists. Soon after nine the valley widened, and we ascended the hills to the left, crossing a gently undulating country clothed with a few stunted oaks, which extended to a considerable distance.

After crossing this elevated land we reached the edge of a cliff overlooking a deep ravine to the S.W.; we descended into it by a winding path over broken rocks, amidst which protruding masses of trap and other igneous formations bore evidence to the convulsions which had once agitated the country. The shales and schists were much contorted in con-

tact with a green serpentinous rock. On reaching the bottom I was surprised to find the stream still flowing towards the N.N.E., and consequently into the Tchoterlek Irmak. We ascended the valley nearly three miles farther to the south; in some parts it was of considerable width, producing corn and millet. At half-past twelve we approached its head, where it separated into several branches, and began ascending a winding road over broken rocks; here the shifting of the baggage gave us considerable trouble, for the only cattle we could procure at Alajah were mares, which were unaccustomed to this work. This was owing to there being no regular menzil, in consequence of which each inhabitant was compelled to keep a horse for the use of the post, and preferred keeping mares, as more profitable. Two of them were accompanied by their foals the whole way to Yeuzgatt.

After crossing a ridge of schistose hills, without a blade of grass, we reached at two P.M. a village situated in a deep valley, and watered by a small stream, whose banks were lined with poplars and willows. From thence we crossed another ridge, consisting of a coarse sandstone, passing into a loose conglomerate containing pebbles of blue crystalline limestone, secondary limestone, jasper, sandstone, and schistose rocks; on our right we had a lofty hill called Habak Tepe, the central culminating point of the district, from whence several ridges radiate in all directions.

From hence we descended rapidly over white slaty rocks, into the valley of Yeuzgatt, where we rejoined the road from Amasia close to the gates of the town. An excellent clay is procured in this valley, derived probably from the decomposition of the igneous rocks, and numerous makers of tiles dwell outside the gate, in a spot which might be aptly called the Potters' Field. Yeuzgatt is surrounded by a low mud wall, neglected in many places; as we rode through the narrow streets I did not observe a single vestige of antiquity: both its houses and walls had a very

modern look. It contains excellent baths, the luxury of which I fully enjoyed, and which speedily removed all the effects of many hard days' riding in sun and dust.

The following day, Saturday, the 20th, I halted at Yeuzgatt, visited the handsome mosque erected by Suleiman Bey eighty or ninety years ago, and explored the bazaars. The account given by the inhabitants, both Turks and Armenians, confirmed my opinion that this never could have been the site of Tavium. Besides its position in a deep valley, commanded on all sides by lofty hills, there was an air of newness about the place which is seldom seen. In fact I was told that the town was founded about ninety years ago by Achmet Pacha, the father of the famous Suleiman Bey Choppan Oglu. The place was only a mountain yaïla, or summer village, until Achmet Pacha seized on it, established himself there, and collected around him a band of followers. His rule, though severe, was just; he was esteemed and respected by his people, and Yeuzgatt flourished under his administration. A magnificent konak or palace which he had erected was destroyed by fire about fourteen years ago.

Sunday, August 21.—Leaving Giuseppe, who was still suffering from ague and fever, under the care of an Italian doctor, I started with Hafiz Agha to visit the ruins of Nefez Kieui and Boghaz Kieui, hoping to get on for a few days without an interpreter. Nefez Kieui is situated fifteen miles west of Yeuzgatt. Our march began by ascending the hills to the N.W., where we found some Turks busily demolishing Choppan Oglu's wall, and even carrying away the foundations. Three miles from Yeuzgatt an extensive view was open to the W., S.W., and S. A range of mountains, called Tchichek Dagh, bearing from W. to S.W., at a considerable distance, was very conspicuous; and to the S.W., about twenty or twenty-five miles off, an old castle, called Ketchi Kaléh, was perched upon a high and pointed rock. Between the fourth and fifth mile I reached Kaijit Kieui, situated in a narrow valley watered by a stream from

the N.E., on the banks of which we put up many plovers. Below this village various trachytic rocks occurred, we crossed a considerable trap dyke, extending from N.E. to S.W., radiating as it were from Habak Tepe, and, after following the stream for nearly two miles, crossed it, and ascended hills of trachytic conglomerate, through which a compact basalt occasionally appeared.

From these hills we overlooked a wide expanse of rocky ridges and yellow plains, stretching towards the west in unbroken succession. One small stream, which we crossed at the ninth mile, by enabling a few small patches to be irrigated, afforded some green spots on which the eye could rest; while the village of Moussa Bey Kieui was a mile off on the left.

After crossing several successive ridges of sandstone and conglomerate, we reached the large burial-ground and village of Hassanji. Here the tatar's hunger would not allow him to resist the pressing hospitality of the inhabitants, and we escaped from the rays of the sun for half an hour under the portico of the mosque, where he endeavoured to reconcile me to his proceedings by procuring, regardless of plague or fleas, a plentiful supply of carpets and cushions. Two miles from Hassanji we reached the almost subterranean village of Kenek Kieui, of which nothing but the doors and chimneys were visible. In the burial-ground were a few broken shafts of columns of red-veined marble, probably derived from Nefez Kieui. A section in the low hills showed a succession of horizontally stratified beds of sands and gravel, the remains of some vast lacustrine or diluvial deposit. As we descended into the valley of Nefez Kieui I was struck with the picturesque appearance of a venerable grey-bearded old man, who, with his back bent double by age, was trudging after his donkey. His dark skin, tanned by above eighty summers to an almost negro black, was in striking contrast with his snow-white linen, the constant dress of the Turkish peasants.

At half-past two we reached Nefez Kieui, inhabited by

Turcomans, but had great difficulty in procuring either food or lodging, in consequence of their being in their tents on the hills. Proceeding towards the ruins, situated a mile to the west of the village, I found in the burial-ground many fragments of columns and other architectural remains, but only one inscription, No. 90. The first thing to remark on reaching the ruins, which evidently marked the site of an ancient city, were the foundations of a building, lately excavated to the extent of about twenty-five feet. The ditch which had been dug on one side of the wall was filled with large blocks of square-hewn sandstone, appearing to have once formed the outer casing of the wall, and to have been fastened together with iron pins, for the sake of which probably the building has been destroyed. On one block the letters C P were carved. High hills rose to the north, and at a little distance to the S.E. and S.W. were two small conical hills, pompously designated by the names of the Great and Little Castles, but without the slightest vestige of a wall or building on either of them, although fragments of pottery, apparently Roman, lay scattered about in all directions. At a short distance to the north many other large blocks of limestone, singly or in heaps, marked the site of a temple or other important building; amongst them were portions of architraves and rich cornices. From the westernmost castle hill Ketchi Kaléh bore nearly due south.

Returning to the village, I sought for inscriptions in the walls of the mosque and private houses, and at length found No. 91 on the pavement. No. 92 was in very large characters, seven or eight inches high, on a slab of marble which formed one of the side-posts of the door of the mosque, and appeared to have been a fragment of the dedication of a temple. But the most curious discovery was No. 93, which was said to exist near the fireplace in an uninhabited cottage. In vain I searched the floor and the walls, until a peasant pointed it out, in or rather up the chimney. It was covered with nearly an inch of soot and

hard-dried smoke, which it took half an hour to scrape off with a chisel before I could decipher it, standing all the while in the chimney-place with my head nearly out at the roof.

Upon the whole I was much disappointed with these ruins. From the descriptions of former travellers I had expected something more perfect, more imposing, and in a better state of preservation; and I could not refrain from reflecting on the many disappointments which a traveller is doomed to undergo in Asia Minor. On the one hand he is told that nothing is to be seen where, perhaps, objects of the greatest interest are yet undiscovered; and, on the other, he is led to expect much in buildings which on examination prove to be of modern date. The Turks look upon him with suspicion, and being convinced that his search for antiquities is connected with a knowledge of hidden treasure, they never volunteer the truth; while the Frank doctors scattered throughout the country, knowing his weak side, invariably deceive him by boasting of their knowledge of ruins which have no existence, and by describing fragments of modern walls, or natural caverns, as splendid buildings, theatres, or temples, covered with inscriptions or supported by standing columns. There is no exaggeration in this statement, for I have frequently experienced the truth of it. But as to the site of Nefez, there can be no doubt that it was once occupied by an ancient city, though many of the remains of architecture have a very Byzantine character. The columns in the burial-ground were neither Roman nor Greek, and some of the capitals and other fragments evidently Byzantine. The coins, too, which were brought me as having been picked up amidst the ruins, with the exception of one of Angora, were of the same character.

Monday, August 22.—Leaving Nefez Kieui at half-past six, we ascended the mountains to the north, and proceeded four miles N. by E., and then eight more N.N.E., until we reached Boghaz Kieui at a quarter after eleven, having twice lost our way upon the mountains. A short distance from Nefez Kieui we passed the black tents of the yaïla,

where the women were baking their bread.* At half-past eight we had reached the barren summit of the chain, which consists of trachytic and porphyritic rocks, and trachytic conglomerate. Descending from this high land we entered a deep and picturesque valley, well wooded in places, which we followed in a N.N.E. direction, until we came out upon the plain of Boghaz Kieui. The trees, which are chiefly fir, do not grow to any size, as the peasants of the neighbouring villages are constantly cutting them for fuel and for timber. The valley increased in picturesque beauty as we descended; the road leading at one time along the bed of the stream, and then high up along the broken cliffs, while barren and pointed rocks rose up on either side out of the decomposing mass of igneous rocks. As we approached the mouth of the ravine the white scaglia limestone appeared, and at Boghaz Kieui the hills consisted entirely of it.

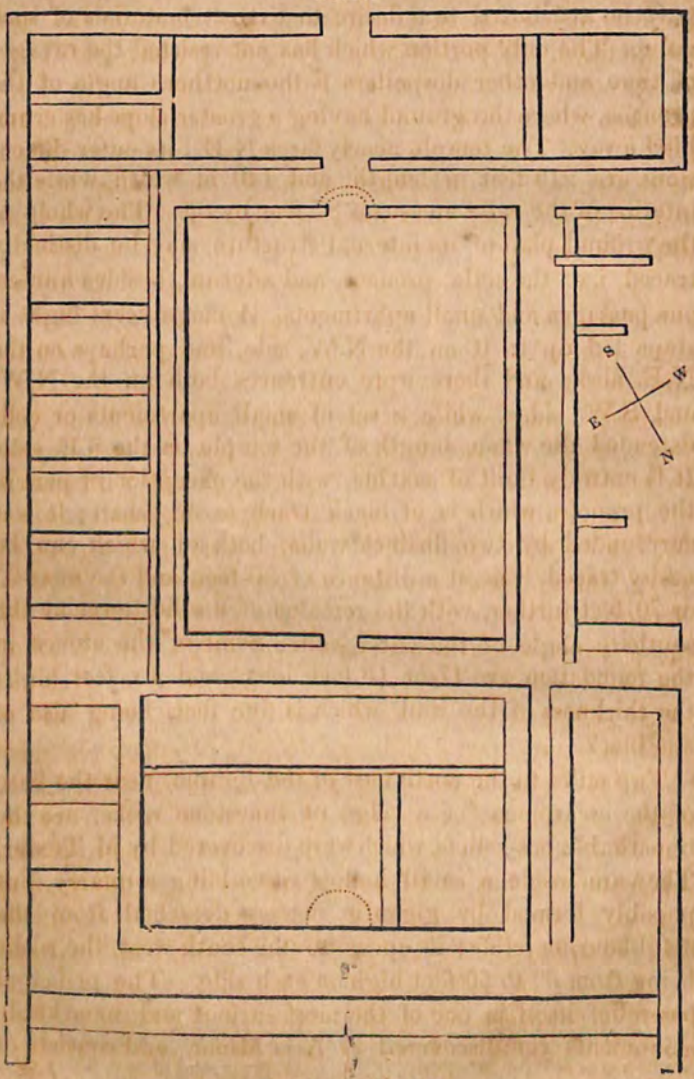
Here I was conducted to the konak of the Agha, who was absent at Constantinople, but was hospitably welcomed by his Chiaya. Having succeeded in obtaining a meridian altitude of the sun, I visited the interesting discoveries of M. Texier, who remained here eight days, making accurate plans, surveys, and drawings of the neighbouring ruins. A few hundred yards to the east of the village a considerable space is inclosed by a high and evidently artificial mound, the N.E. side of which is formed by massive Cyclopian walls of huge stones. Half a mile to the S.E. is the site of another fort upon a high rock defended by deep precipices to the east, and on the other sides by a glacis sloping at an angle of 40°, and surmounted by a wall of loose stones. Several cisterns for water had been dug in the solid rock upon the summit, and the ground was strewed with fragments of vases and of pottery. I subsequently learnt that M. Texier, in the course of his excursions, had discovered

* A lump of unleavened dough, weighing perhaps a couple of ounces, is rolled out until it is above two feet in diameter, and as thin as a wafer. This is laid on the bottom of a large cauldron, under which is a small fire. It is only left a few minutes, and is in fact merely dried, for it remains soft, and when served to a guest is folded up like a damp napkin.

two more Cyclopian forts on the hill to the south, besides the walls of an extensive city in the same gigantic style.

Between the two forts which I have described are the ruins of a large temple of grand and magnificent propor-

No. 11.



[*Ground Plan of Temple.*]

tions, and built of enormous blocks of well-cut and well-fitted stones. The whole plan of the foundation is perfect, as shown in the accompanying wood-cut, and in many of the stones are the sockets in which metal pins appear to have been fixed. The destruction of the building may in great part be attributed to a desire to extract materials of such value. The only portion which has not resisted the ravages of time and other despoilers is the northern angle of the pronaos, where the ground having a greater slope has crumbled away. The temple nearly faces N.E.; its outer dimensions are 219 feet in length, and 140 in width, while the interior of the cella measures 87 feet by 65. The whole of the ground plan of its internal structure may be distinctly traced, i. e., the cella, pronaos, and adytum, besides numerous passages and small apartments. A magnificent flight of steps led up to it on the N.W. side, and perhaps on the N.E. also; and there were entrances both on the N.W. and S.W. sides, while a set of small apartments or cells extended the whole length of the temple on the S.E. side. It is entirely built of marble, with the exception of part of the pronaos, which is of black trachyte or basalt; it was surrounded by two distinct walls, both of which can be easily traced—one at a distance of 30 feet, and the next 65 or 70 feet further, with the remains of a solid tower at the southern angle of the outer wall. Some of the stones in the foundation are 17 or 18 feet long, and six feet high; the thickness of the wall, which is five feet, being also of one block.

Two miles to the north-east of the temple, near the base of the escarpment of a ridge of limestone rocks, are the remarkable bas-reliefs, which were discovered by M. Texier. They are inside a small hollow resembling a quarry, but possibly formed by gigantic masses detached from the neighbouring cliffs; it opens to the south-west, the rocks being from 30 to 50 feet high on each side. The principal bas-relief itself is one of the most curious and remarkable monuments yet discovered in Asia Minor, and consists of

several groups of figures carved upon the surface of the rock a few feet above the ground. Many of the figures, however, are much worn and nearly obliterated, particularly those furthest removed from the centre; perhaps, being intended for inferior persons, they were originally less deeply cut. The composition seems to represent the meeting of two kings, each of whom holds emblems of royalty in his hand, and is followed by a long train of soldiers or attendants, dressed in his own costume, and extending along the two sides of the hollow space. The two principal figures are five feet high, the few figures imedimately attendant upon them are three feet six inches; and the others two feet six inches. The principal figure on the left-hand side, coming as it were from the west, is standing upon a nondescript animal, and is dressed in a tight close-fitting dress, with a high conical cap and beard; while the other principal figure is dressed in loose flowing robes with a square turreted head-dress and without a beard. Some of his followers are standing upon a lion or tiger, and others upon a two-headed eagle. M. Texier considers the subject of the sculpture to be the meeting of the Amazons and Paphlagonians; but I am rather inclined to think it represents the meeting of two conterminous kings, and that it was intended to commemorate a treaty of peace concluded between them. The Halys, which is not many miles distant, was long the boundary between the kingdoms of Lydia and Persia, and it is possible that in the figure with the flowing robes we may recognise the king of Persia, and in the other the king of Lydia with his attendants, Lydians and Phrygians, for their head-dress resembles the well-known Phrygian bonnet. This spot may have been chosen to commemorate the peace, in consequence of the neighbouring town being the chief border city. This opinion is confirmed by the circumstance of the principal figure on the eastern side being represented standing [illegible]n a wild beast, probably intended for a lion, and which in fact resembles the animals sculptured upon the monuments of Persepolis, while some of

his attendants are standing upon the wings of a double-headed eagle, a symbol frequently met on ruined Persian buildings even of a later period. But what had the Amazons to do with a lion or a two-headed eagle? Besides, this is not the locality ever attributed by the ancients to the habitations of that singular people.

In the same hollow is another figure, seven feet high, sculptured upon the rock, but detached from the above-mentioned procession. Curious emblems are in his hand also, and other figures of the same character are seen in a neighbouring recess in the rocks, some of which may have been intended as sepulchral monuments.

M. Texier has given to the town, evidently an important one, of which these ruins mark the site, the name of Pterium, a place of no great consequence, not mentioned by Strabo or other later geographers, but alluded to by Herodotus* under the name of Pteria, as having been taken by Crœsus, who had crossed the Halys and marched into that part of Cappadocia which is opposite the Sinopian territory. Here he was encountered by Cyrus, and a great battle was fought in Pteria without any decisive result. Now it is probable, from its being mentioned in connexion with Sinope, that Pteria was near the shores of the Black Sea, and not so far inland as this place, although the allusion to the battle between Crœsus and Cyrus is a remarkable fact in connexion with the bas-relief which I have just described.

In a short paper which I drew up after my return to Smyrna, and which was published with some alterations in the Journal of the Royal Geographical Society of London,† I have endeavoured to show that these ruins can be no other than those of the long sought for Tavium, or Tavia, according to some geographers, the capital of the Trocmian Galatians. We learn from Strabo‡ that Tavium was a place of great trade, and consequently must have had

* Lib. i. c. 76.

† Vol. vii. p. 74.

‡ Strabo, xii. p. 567.

many communications with the surrounding cities—a fact confirmed by the many roads leading from it to various towns laid down in the Peutinger Table and in the Itinerary of Antoninus. It was also celebrated for a colossal bronze statue of Jupiter, a sacred asylum, and a temple.

By a careful comparison of the distances given by the Itineraries, from Tavium to Angora, Cæsarea, Amasia, Zela, and Neocæsarea, and of the position of Boghaz Kieui with regard to these cities, it will, I think, be seen that no other spot can be found, the position of which so nearly agrees with that which Tavium must have occupied with regard to those different places.

The ancient Itineraries give no less than seven routes, which have Tavium at one extremity or the other; but as they do not agree with each other, we cannot trust them implicitly without some important corrections. The Antonine Itinerary gives us two routes: 1. From Angora to Tavium. 2. From Tavium to Cæsarea. The Peutinger Table professes to give five routes: 1. Angora to Tavium. 2. Tavium to Neocæsarea by Amasia. 3. Tavium to Neocæsarea by Zela. 4. Tavium to Comana Pontica. 5. Tavium to Mazaca or Cæsarea.

Before I proceed to compare these routes, and the positions of the various places, with the modern roads, I must advert to a few corrections in the ancient Itineraries, which are indispensably necessary for the investigation of the comparative geography of the country to which they refer.

In the first place the road from Tavium to Neocæsarea by Zela, although given as a distinct road from that to Comana Pontica, must be considered as the same as far as Zela, and must be corrected by it. This town has hitherto been placed too far south in all our maps; it is situated almost in a direct line between Boghaz Kieui and Gumenek in the upper valley of the Iris above Tocat; indeed it is rather to the north of that line, and the modern road from Yeuzgatt to Tocat passes through it. This circumstance explains why some stations are omitted in the road from

Tavium to Comana Pontica, as they had been already given in the former. Another correction which must be made is to consider Ægonne on the one road, and Eugoni on the other, as the same place; there being but one road, we cannot look for two places of such similar names in such close vicinity. It may be said that one is 72 miles from Tavium, and the other only 38, but this discrepancy is removed by another correction which must also be made, viz., to expunge the first name on the road to Zela; the place called Rogmor is evidently an interpolation, or abbreviation of Trocmorum, signifying that Tavium was the capital of the Trocmian Galatians; therefore the first station will be Ægonne or Eugoni, at thirty-six or thirty-eight miles from Tavium, according to both roads.

Let us now consider the four remaining roads.

1. Tavium to Angora.—The Antonine Itinerary here gives 116 miles; the last station is omitted in the route given by the Peutinger Table, which is therefore useless for our present purpose, except in so far as it confirms the distance from Angora to Ecobroge or Eccobriga, which is 68 M.P. according to the one, and 69 according to the other, although differently subdivided. Now the distance on my map from Boghaz Kieui to Angora, the longitude of which latter place was fixed by Messrs. Ainsworth and Russell, is 85 G.M.; this, taking the degree at 80 M.P., which is I think more correct than at 84 as proposed by Major Rennell, gives 114 M.P., which may be considered a very fair approximation to the 116 M.P. given in the Antonine Itinerary, as the distance between Tavium and Angora.

2. Tavium to Cæsarea.—Here the Antonine Itinerary gives 109 M. P. The road of the Table is so out of all proportion, giving 191 M. P., that it becomes entirely useless, unless we suppose the road made some great *détour*, and that Aquæ Aruenæ in the one is, as is very probable, the same place as Therma in the other route. In this case we get 113 M. P. by this route. Here also the distance on the map gives 85

geographical miles, which are equal, as I have already said, to 114 M. P.

3. Tavium to Zela.—This is a portion of one of the routes from Tavium to Neocæsarea; they are both very imperfect; the real distance, whether by Zela or by Amasia, must be nearly the same, and yet the former is made to be 185 M. P., and the latter only 136 M. P. But a portion of that which passes by Zela appears to be correct as far as that town, after leaving out the first station to Rogmor or Trocmor; for we have 90 M. P. as the distance from Tavium to Zela, according to the Peutinger Table, while the map gives 70 G. M. between Boghaz Kieui and Zilléh, equal to 93 M. P., which is sufficiently near. The other portion of the route from Zela to Neocæsarea is too imperfect, as well as the whole of the route by Amasia, to be of any use in assisting us as to the position of Tavium. It is also unnecessary to attempt it; for having found that three of the four routes so nearly coincide in one point, with which it is trigonometrically impossible that the fourth should agree, we may conclude that there is some great error in the manner in which that fourth route is laid down.

From the preceding observations I cannot but think myself justified in considering the position of Tavium satisfactorily established at Boghaz Kieui; whether we consider its situation with regard to the other towns, the positions of which have been well ascertained, or the insufficiency of the claims of other places, or whether we merely look to the intrinsic claims of Boghaz Kieui itself, and the importance of the antiquities which it contains.

CHAPTER XXIII.

Return from Boghaz Kieui to Yeuzgatt—Habak Tepe—Return to Alajah—Ancient tombs—Deïrmen Kieui—Leave Alajah—Enter Galatia—Reach Soungourli—Visit Salt-mines of Chayan Kieui—Cross the Delhiji Sú—Kotchuk Kieui—Kalaijik—Inscriptions—Akjah Tash—Kurdish Encampment—Ravli—Tchibouk Ova—Hussein Dagh—Reach Angora or Engureh, anc. Ancyra.

TUESDAY, August 23.—It was impossible for me to spend so much time in exploring this interesting site as M. Texier had already done; I therefore prepared to return to Yeuzgatt, a distance of six hours, early this morning. Leaving the konak at 8 A.M., we entered a narrow gorge about a mile from the village, after passing the temple of Jupiter on our right: the hills on the left afforded a good section of trachytic or igneous rocks underlying the limestone, of which the lower portion is much broken up. These igneous rocks have been protruded subsequently to the deposition of the limestone, as fragments of the latter have been caught up and enveloped in them. After ascending a picturesque ravine for two miles between limestone rocks and beds of indurated shale, we came upon porphyritic trachyte, which throws off the altered shales and jaspers at a considerable angle towards the east, and we soon entered a broad valley in which much corn was grown, while the low hills on either side were covered with oak coppice. At ten we reached the head of the valley, and crossing a ridge of sandstone hills descended into another, down which we followed a small stream nearly south for two miles. Then leaving the stream flowing to the S.W. we struck up a lateral valley E. by S., in which we continued three miles, until it branched off in two directions, when we ascended the intermediate ridge of hills, and continued winding up in a S.S.E. direction for four miles over rugged broken rocks which

showed great disturbance and dislocation of the different beds, until we reached the summit of Habak Tepe, consisting of the same white (igneous?) rock which I had seen on the road from Alajah. The view from the summit was very extensive, and the warm breeze was strongly impregnated with the smell of the gum cistus. From Habak Tepe we descended by a steep and winding road, in a general direction of S. by E., until we rejoined the road from Yeuzgatt to Nefez Kieui, about half a mile from the town.

I procured a few coins during my stay at Yeuzgatt, but none of much value or importance. The son of the Agha of Boghaz Kieui said that many were formerly found there, and assured me that a great treasure was concealed somewhere, actually wanting me to tell him where it was, and maintaining that I knew and must know where it was to be found.

Wednesday, August 24.—Halted at Yeuzgatt to enable Giuseppe to recover his strength. From the reports of an Italian doctor who had been sent for to attend the governor, and of other persons, I had reason to believe that there were several curious ruins and antiquities in the neighbourhood of Alajah, which I had not heard of when there, and consequently determined to return thither, and proceed from thence to Soungourli on my way to Angora, instead of going by the direct road. This Italian doctor seemed to be intelligent, and very superior to a Greek colleague, who was also here; he had served Choppan Oglu for several years, and spoke in high terms of the many curious antiquities which had been discovered at Nefez Kieui. Amongst other things he said that Choppan Oglu found there a large porphyry basin or vase, as large as the celebrated one in the Vatican, which he broke up to form a sherbetlik or buffet. The only object of antiquity now shown as brought from Nefez Kieui was a handsome marble sarcophagus, supported at the angles by four small pillars, and used as a fountain in the court of the Ali Effendim Djami. During the whole of my stay

in and near Yeuzgatt the weather was mild and temperate; the thermometer in the shade never rising above 78° or 79° Fahr., and in the mornings generally marking 62° or 64°.

Thursday, August 25.—We returned to Alajah by the same road by which we had reached Yeuzgatt, and on arriving at the little village of Seid Ouseu halted to ascend the hills to the west of the valley, where I had been led to expect some extensive ruins, but on reaching the summit of the hill I only found part of a rubble wall, apparently the remains of a small Turkish fort. In my disappointment I was ready to come to the conclusion that all Italian Medicos in Asia Minor were as ignorant and as wanting in discrimination as the Turks; every symptom of a wall on the summit of a hill is immediately magnified into the ruins of an ancient city.

Friday, August 26.—At half-past seven I started under the guidance of a Turk to visit some tombs excavated in the rocks, about four miles to the north. After crossing the plain for nearly two miles N. by E., we reached the banks of the Alajah Chai flowing north until it reached the mountains. We continued along its right bank for some distance until we arrived at the entrance of a narrow gorge, through which the river flowed, and we came in sight of the tomb. At a distance it resembled four narrow chambers high up in the limestone rock; but on a nearer approach it was very remarkable, consisting of a long gallery thirty feet by ten, and about sixteen in height, supported by three Doric columns of rude proportions tapering considerably towards the top, as represented in the accompanying woodcut; their circumference at the base, or one foot above the ground, is seventeen or eighteen feet. The gallery opens at each end into a chamber ten or twelve feet square, by a small doorway three feet from the ground, and lighted by apertures about a foot square, cut through the outer wall of rock. In the centre of the gallery is a niche or chamber extending a few feet into the rock; another is also cut in the left-hand chamber, opposite the

No. 12.

[*Tomb near Alajah.*]

door, on which it was probably intended to lay the body, for there can be no doubt that it was the tomb of some distinguished person. Beneath the floor another chamber had been also hollowed out, into which I descended; this was extremely small, with one or two niches opening out of it, and with the appearance of another passage leading from it; but this last was choked up with rubbish and the dung of birds.

On examining the hills at the back I found that the tomb was excavated in an insulated rocky pinnacle detached from the mountain range, and I observed also the commencement of another tomb on the face of the rocks to the left.

I returned to Alajah in time to get a meridian observation, and afterwards started in search of other antiquities, reported to exist on the hills five miles to the S.S.W., above Deïrmen Kieui. Two miles from Alajah we passed the ruins of a small church, or mosque, called Tekiyeh or Tekia, probably the place where Tournefort halted in his way from Amasia to Angora. The building is

square; a mixture of stone, brick, and rubble. On the east side is a handsome marble entrance in Saraceno-Gothic style, while within it is built in the form of a Greek cross, having one of the four recesses facing the east. At the north end under the trees was a beautiful fountain of clear cold water in a deep marble basin, in which were many fish, apparently a species of carp. The Turks of Alajah said that the building was an old Greek monastery belonging to Kara Hissar, which is not many miles from Alajah. In the outer walls I found an imperfect inscription,* below which was a cross nearly obliterated.

On reaching Deïrmen, we entered the narrow ravine in which the village is situated, led on by the hope of finding inscriptions, bas-reliefs, and ruins; until, after ascending the valley by a difficult path, I was shown a small tomb or chapel excavated in the rock, but of no interest; thence ascending the steep hills to the west, we reached an ancient tumulus, called by the Turks Sangiac Tepe, or hill of the Standard, a name frequently given by them to these artificial mounds. Along the crest of the hill, and particularly near the tumulus, were the remains of old walls, or at least long lines of stones heaped together and crossing each other at various angles; they were but slightly raised above the ground, and whether ancient or modern I could not venture to decide. Being satisfied that nothing interesting was to be found here, I returned to Alajah, where in the burial-ground I found many stones which had evidently been brought from a Christian building or cemetery, some still having crosses upon them, and others obliterated inscriptions, besides large blocks of marble without any particular marks.

Saturday, August 27.—From Alajah, which we left at a quarter after seven A.M., we ascended the plain of Hussein Ova for seven or eight miles, with a low range of sand-hills on our right. Soon after eight we passed the small village of Eski-Yaté or Tepe Kieui, built on a low rising mound in

* See Appendix, No. 91.

the middle of the plain. This gradually narrowed, and between the seventh and eighth mile we found ourselves ascending the hills by a narrow valley, where we passed an encampment of Turcomans; and at ten A.M. reached the summit of the ridge, whence we descended by a similar valley, along the banks of a stream flowing into the Halys. This ridge, therefore, may be considered as the separation between Pontus and Galatia. The large village of Salman Kieui was a conspicuous object in the plain below us about six miles off to the W.S.W. Our course was still along the hills which formed its northern limits, until at half-past eleven we reached the plain watered by a stream flowing north for two or three miles. Here also were many Turcoman tents pitched on the low marshy ground, while their separate flocks collected on the surrounding hills had a picturesque appearance, and the large herds or droves of camels were grazing in a different direction.

We forded the river at a quarter before twelve, and ascended the hills on the left, and after two miles in a N.W. direction over the brow of the hill again descended to the valley, in which we continued five miles until we reached Soungourli, after crossing to the north or right bank of the river. Rich and well-watered gardens and shady orchards skirt its banks for more than a mile and a half above the town, where we arrived a few minutes before two; but a great part of the place was in ruins, and many uninhabited houses were crumbling to dust, proving that the same destructive elements were at work here as in other parts of Turkey. The new conscriptions and levies were everywhere described as a most oppressive measure, the effect of which was to depopulate whole districts, in consequence of the young men being removed to the capital.

I lodged in a Turkish house, and a miserable place it was, though my landlord was one of the chief men of the town. Last year he was Menzilji or post master, and complained of it as a most ruinous business; he said that he was only allowed 1000 piastres a year, or two purses, and

was obliged to keep fifteen horses; he declared he would not accept it again for fifteen or twenty purses. No antiquities were to be heard of, except a rather handsome marble sarcophagus, which I found at a ruined fountain near the Agha's konak, ornamented with garlands and ram's heads.

I had hitherto failed in all my attempts to visit any of the mines of rock salt, for which this part of Galatia as well as Pontus was celebrated even in the days of Strabo. I could never learn where they were with sufficient precision to enable me to combine a visit to them with my other plans. I now learnt that a considerable mine existed at a place called Sarek Hamisch, six hours off to the north, which was still worked; and as my landlord offered to take me there and back in one day, I resolved to act upon his recommendation.

Sunday, August 28.—Starting before seven under the guidance of my host, who was armed with a long Kurdish lance, and mounted on his horses, we ascended the undulating hills which form the northern limit of the rich valley of Soungourli, and reached the summit in about six miles. Here, whilst admiring the extensive view before me, I was surprised to find myself in the midst of a red sandstone district; the whole country as far as I could see to the W. and N.W. being a succession of hills, consisting of red marls, sands, and sandstone conglomerates, alternating with marls and gravels of a grey or bluish colour, the very counterpart of the saliferous districts in England. At nine we commenced a rocky descent, with sections of the red and blue sandstones on either side, down a valley which opened into an extensive plain, on the northern side of which was the village of Sarek Hamisch. Behind the village to the N.W. rose a rugged and serrated ridge of hills of red sandstone conglomerate, in which the salt-mines were situated; but as the principal mine was on the northern flank, we were obliged to leave the hills on our left, and to keep to the east up a gently rising valley, in order to cross them at a lower pass, by which at half-past

eleven we reached the village of Chayan Kieui. The red sandstone beds at first showed a very slight inclination towards the S.E., but as we proceeded to the N.W., the inclination gradually increased, until on reaching the central hills where the mines are situated the beds were completely vertical. The conglomerate must be of a more recent formation, geologically speaking, than the new red sandstone of England, as it contains pebbles of secondary or cretaceous limestone, supposed to be the equivalent of our chalk, together with jasper and trap rocks.

On reaching Chayan Kieui, my guide finding some friends preparing to partake of their mid-day meal, quietly seated himself amongst them without a word of welcome, and I followed his example; the "hosch geldin" was not pronounced until it was all over, nor did even Turkish curiosity venture till then to ask who I was, or what I wanted, or where I came from. At length, having satisfied our own appetites and the curiosity of our hosts, we left the village, and ascending a narrow valley proceeded a mile and a half S.E., when we reached the open mine, situated at the head of a narrow winding valley in a hollow surrounded by vertical beds of red sandstone, rising in peaked pinnacles to a great height, like the time-worn battlements of some old castle. In these vertical beds of red sandstone I had observed several thick veins of selenite, besides smaller ones, intersecting each other in various directions. The salt itself occurs about six or eight feet below the surface, and is perfectly horizontal, being overlaid by a thick bed of blue clay, and that again by beds of sand, gravel, and clay. The upper surface of the salt, which has a greenish transparent hue, undulates a little, as do also the thinly laminated strata of the salt itself.

This want of conformity between the red sandstone formation and the rock-salt beds is very remarkable; for, although I cannot say that there may not be some beds of rock-salt conformable and contemporaneous with the red sandstone in some districts of this part of Asia Minor, yet it

is evident that the deposition of the salt here has been subsequent not only to the formation of the red sandstone, but even to the period when it was heaved into its present vertical position. We must suppose a small lake to have existed in the bosom of the mountains surrounded by vertical beds of red sandstone, in which the salt was gradually deposited.

Returning over the hills in a S.S.E. direction we passed another smaller salt-mine on the south side of the mountains, not now worked; then descending by a steep ravine, and crossing a narrow wall of vertical beds of red sandstone between two parallel valleys, we regained the rich plain of Sarek Hamisch, full of herds and flocks. The waters flow towards the west, in which direction the plain extends to a great distance. Near its centre we passed an old Tekiyeh, or Djami, belonging to Sarek Hamisch, evidently a Turkish building, but very large, and of great solidity for so small a place.

The valley of Soungourli is renowned for its fertility and the richness of its soil; its gardens are productive, and supply the neighbourhood with fruit. The Ex-Menzilji informed me that the harvest this year had been very abundant: a good crop produces from twelve to thirteen fold for every measure of seed sown. The price of barley was now twenty piastres the kilo, but is sometimes as high as forty. The kilo here consisted of 10 batman, or 60 okes, or 135 lbs.

Monday, August 29.—I had intended going from Soungourli to Changeri, the ancient Gangra, but as the plague was raging there, I determined to proceed direct to Kalaijik, which has been identified by M. Texier, although I know not on what grounds, with an ancient site called Galaton Teichos. The distance from Soungourli to Kalaijik is eighteen hours or fifty-four miles. We started at seven, and descending the valley passed for some way between gardens and vineyards, extending on either side as far as irrigation can be carried. I here saw the sun-flower, called by the Turks by the same name, cultivated in several gardens; they eat the seeds, and also extract an oil from

them. Our course was nearly west, and, as we descended the valley, we soon came upon the red sandstone formation, which showed itself also in the hills to the right and left, while in front a remarkable bluff ridge of red sandstone rock formed the western limit of the plain. Five miles below Soungourli the valley widened into an extensive and fertile plain, in the middle of which was the small village of Beshbounar. A mile farther we passed the village of Ahabounar half a mile off to the left, and presently a ruined building in the plain, consisting of two low arches, apparently very old, but Turkish; after which our course changed to W.S.W.

A few minutes before ten we commenced the ascent of the red sandstone ridge, here dipping E. 50°; and on reaching the summit crossed a barren undulating country, rising into considerable hills on either side, in which the stratification of the harder beds of red or grey sandstone was conspicuously marked by narrow ridges of rock, projecting above the surface. The eastern dip of these beds gradually increased in intensity until it became almost, if not quite, vertical, with a strike from north to south.

At half-past ten the valley by which we were descending opened into a circular basin, where it occurred to me that a formation of rock-salt probably existed beneath the surface, similar to what I had seen near Sarek Hamisch; this supposition was strongly corroborated by finding the almost dry bed of the stream, as well as the surface of the plain wherever water had rested, covered with a saline incrustation. At eleven we crossed this stream near the spot where it enters the plain of the Delhiji Sú, the banks of which we reached after traversing the plain in a W.S.W. direction. It contained very little water, and its sources are still unknown; but at the ferry, which we reached soon after eleven, the water was very brackish, owing to its passing through salt-beds.

After crossing a low ridge of hills of marly formation, containing much selenite, we descended to a dry valley, in

which were a few cotton-plantations. The road then led across a flat and stony plain, consisting of beds of sand and alluvial gravel, in many places covered with boulders and pebbles of various rocks, sandstone, limestone, marble, jasper, trap, and quartz rock, and dotted over with numerous oak-trees, from almost all of which flocks of turtle-doves flew out as we passed by.

At half-past one we crossed the bed of a torrent flowing to the north, and commenced a steep ascent up a narrow ridge, between two deep ravines. Soon after two we reached the summit of the hill, which consisted of white and yellow marls and sand, with boulders of quartz rock on the surface, and descended, over hills covered with dwarf oak, to the village of Kotchuk Kieui, where we arrived at half-past two. It is reckoned nine hours from Soungourli, and we were obliged to halt for the night in a miserable konak, where our only accommodation was in an open gallery. The elevation of this place must be considerable; the thermometer after sunset fell to 64° Fahrenheit, and water boiled at 204°·2.

Tuesday, August 30.—Such was the exposed nature of our sleeping quarters, that on packing up this morning we missed a chicken and a brass candlestick. The villagers declared that they must have been carried off by one of the half-starved unclaimed dogs, many of which are for ever prowling about a Turkish village. This might be true with regard to the chicken, but the candlestick was rather a tough morsel for the dog or for us to swallow. We strongly suspected our hosts, until it was found on a neighbouring heap of rubbish with the marks of a dog's teeth in the end of the candle. It is true I had seen one of them once or twice during the night sniffing about near me, and had nearly set the wooden house on fire by throwing at him in the dark the first thing I could lay my hands on, which happened to be a log of wood, the other end of which was blazing in the fire.

At half-past seven we got away from Kotchuk Kieui, and

after crossing undulating hills for three miles found the ground covered with boulders and angular fragments of trap; a little farther on, as we approached a village called Boyeuk, the hills consisted entirely of trap and greenstone, and the village on our right was built upon a conical mass of the same rock. This outburst of trap, which, as I afterwards discovered, extended considerably to the west, was the principal, if not the sole cause of the disturbance of the red sandstone formation, by which it had been tilted into its present vertical position. A mile farther we passed the village of Selami Kieui, and at a quarter before ten reached the summit of a lofty ridge, whence we could trace the course of the Halys eight or nine miles off by the deep depression in the waterworn and furrowed hills, although the river itself was not visible. The red sandstone again appeared to the N.W., apparently beyond the trap rocks which had burst up through the midst of that formation.

From these hills we descended by a narrow ridge of quartz rock, and then along a winding valley for several miles, until at eleven A.M. we entered a large plain, which we crossed obliquely in a W.N.W. direction. Here we were again on the red sandstone formation, dipping as I had expected west by north at an angle of 45°; but as we advanced the angle of inclination became considerably less. At twenty-five minutes after eleven we entered another and larger valley, which we ascended for three miles in a W. by S. direction, until at a quarter after twelve we reached the summit of a high range of hills, extending from N.E. to S.W., and consisting of red sandstone and conglomerate. From thence we descended rapidly by the wild and romantic ravine of Barsek Dere, the steep sides of which were clothed with wood for several miles. A few years ago this road was infested by bands of robbers, who were the more dangerous on account of the numerous windings of the glen: the general direction of our route was N.W. As we advanced the stratification became vertical, and after passing some beds of nummulitic limestone, apparently underlying the red

sandstone, I found myself surrounded by a great variety of igneous rocks—domite, trap, trachytes, porphyry, &c., with trachytic conglomerates, which rose up in wild confusion, and by their dark and sombre colours added to the wild appearance of this remarkable ravine.

After emerging from the pass the igneous rocks still continued, and as we approached the Halys several trap dykes were seen stretching across the road from E.N.E. to W.S.W. One of these stood four feet above the ground, with altered marls attached to it on either side, for above a foot in thickness, rather resembling the production of human hands than the effect of igneous agency. After reaching the Halys, and as we ascended its right bank in a W.S.W. direction, more trap dykes appeared traversing the hills and country in various ways, but chiefly penetrating the igneous rocks, which rose precipitously on the left, while the deep and muddy river flowed rapidly on our right. A few vineyards have been planted here on both sides of the river, and the grapes were nearly ripe. After proceeding up the valley for two miles we crossed the river a little before three by a wooden bridge, formed of planks laid across a few slender beams, in many of which large holes had been worn; these were filled up with loose stones, but there was no parapet. Soon after leaving the bridge we crossed a low range of hills extending from N.E. to S.W., and then continued for two miles in a westerly direction over the stony plain, traversed by a wide but now dry bed of an extensive torrent, which in winter must cause considerable damage; we crossed it near the striking and picturesque walls of Kalaijik; in the midst of the mud-built houses and the deserted tenements of a reduced population, a lofty and insulated hill of red trachyte, crowned with the ruined battlements of a castle, rises far above the plain, and above the semicircular amphitheatre of barren hills behind it. We entered Kalaijik at fifty minutes past three, and found a comfortable konak in a clean Armenian house. The windows to the N.W. overlooked the flat roofs of the dwellings

below, and the green valley to the north of the town, which, being well watered, was filled with gardens and fruit-trees far up towards the hills. It was a most refreshing sight to look out upon these green and fruitful gardens after the dust and heat of the day. But it is a remarkable fact, though not unusual in this country, that, however well watered this valley is, not a drop reaches the plain which we had crossed, the whole being consumed in irrigating the gardens. On the hills to the south a few green patches of garden-ground also marked where a scanty spring or stream of water gave its refreshing influence; for here, as in other parts of Anatolia, the extent of the garden-lands is limited by the supply of water applicable to the purposes of irrigation. Wherever enough can be obtained to last for the whole year, gardens and melon-grounds are planted; but if it can be had only during the spring, corn is grown, which in these elevated districts requires irrigation during that season; while the hills and undulating downs, which cannot be irrigated even in the spring, are condemned to perpetual barrenness, or only afford a scanty pasture to the cattle of the neighbouring villages. Sometimes the supply fails in places where gardens have been planted, which is immediately perceived by their neglected and burnt-up look.

Wednesday, August 31.—The ruined castle which I visited this morning is decidedly Turkish, but appears to be the work of different periods. In the gateway of the lower or outer wall were a few fragments of ancient sepulchral monuments and of inscriptions almost illegible.* Near the summit of the Acropolis was a small postern gate, which, though it was blocked up with old guns and stones, we contrived to lift off the hinges, and found in the outer wall some large Hellenic-looking blocks. In the Armenian burial-ground also are many large stones evidently derived from ancient buildings, some of them of a remarkable shape, being octagonal and tapering slightly upwards, like frusta

* See Appendix, Nos. 95-97.

of unfinished columns, with holes on the top as if for letting in other stones. They may have been sepulchral cippi, used in early Christian times. The sides of some were slightly ornamented, and on one were a few words; others had long inscriptions.* No. 98 was on a large block of marble, the lower part of which was gone, and No. 99, in Latin, was on a large marble column which appears to have been a Roman milliarium, or milestone.

Kalaijik, now nearly a heap of ruins, still contains from 500 to 600 houses, most of them Turkish, the rest Armenian. Not many years ago it was plundered by a celebrated robber named Kadi Keràn, who quartered himself and followers on the town for seventeen days; from the effects of which it has not yet recovered. Turks and Armenians were indifferently plundered of almost everything they possessed.

Having heard that some inscriptions and ruins were to be seen at a small village called Akjah Tash, three hours to the N.W., I determined to visit it in my way to Angora, although not in the direct road. Leaving Kalaijik soon after eleven, we crossed a lofty chain of hills to the N.W., partly through a narrow and wild ravine. In two hours we reached the summit of the pass, whence a short but rapid descent brought us into a fertile plain watered by a stream flowing N.E., which was now dry. The village of Akjah Tash was visible on the other side of the plain, at the distance of between three and four miles to the N.W.; at half-past two we reached its mud houses, built on the southern slope of an almost insulated limestone hill which rises behind it, and may have been the Acropolis of an ancient city. Many remains of antiquities were in the walls of several houses in the village. The inscription No. 100 was on a large block of stone, with a bas-relief above representing the bust of a Roman senator. No. 101 was on a stone in the wall of the same house with two figures above, and below them a half-length figure

* See Appendix, Nos. 100 and 101.

with the toga, enclosed within a wreath or garland. Another large block of marble with a figure rudely sculptured on it, carrying a standard surmounted by an imperial eagle, seemed intended to form part of a large building, and the marks of the chisel were still visible upon it. On the hill behind the village were more blocks of stone, and amongst them one evidently sepulchral, being divided on one side into four compartments, in two of which garlands were sculptured, in another a large figure like an inverted gamma, while the fourth was too much injured to distinguish it. All these stones are of the same material as the hill itself, a compact semi-crystalline limestone.

On the summit of the Acropolis are the remains of lines of old walls, and houses of large and small stones irregularly heaped together. In the burial-ground are several fragments of columns, and large blocks of stone, while long lines of wall, apparently ancient, stretch away to the south. It is evidently the site of an ancient town, which was situated between the present village and the burial-ground, with its Acropolis to the N.N.W., and commanding a rich and extensive plain towards the south. With regard to its name we have but few data to go on; but the inscription No. 101 leads me to think that it marks the site of Come, the capital of the Comenses, who are described by Pliny as a people of Galatia; if so, the vanity of an individual who, during his lifetime, had all his honours and titles engraved on his tombstone, will have been the means of discovering the site and name of a town lost during many centuries.

Thursday, September 1.—Leaving Akjah Tash a little before seven, the road led us along the foot of the hills which formed the north and north-west limit of the plain, passing through the village of Eleijik. Schistose rocks alternated with the limestone; and the undulating and partly cultivated country sloped gently to the valley on our left. At nine our Suriji mistook the road; and, after passing through another small village, led us to the N.W.,

over a steep ridge of schistose rocks, from whence we descended into a green valley, where we unexpectedly found ourselves in the midst of a Kurdish encampment. Thanks to Reschid Pacha, who had lately succeeded in putting down the Kurdish tribes, who had revolted in their native country of Kurdistan, we were not plundered. The Tatar's appearance ensured our being treated with respect, but it did not prevent the robber-shepherds from asking him who we were, and whether we were rich. However, they civilly showed us the right road, and we descended the valley to the S.S.W. I admired the bold and independent manners of these roving dwellers in tents, and the gay colours of their dresses. Their tents appeared larger and longer, and more like regular dwellings, than any I had yet seen, although equally made of black goat's-hair cloth. Each is divided into two, the outer part being intended for the men, one side of which remains open all day, whilst the other is closed all round. Many greyhounds were about the tents, all with body-clothes made of a thick coarse felt, like those of the horses which were picketed around. I also saw several young girls who wore a small ring through one nostril, which, I was told, signified that they were unmarried.

Leaving this retired spot, we ascended the ridge of hills to the south, and, in a quarter of an hour, descended into another deep valley, whence we regained the road which we had missed. Several springs rise in this valley, which form a small stream, down the banks of which we pursued our way due west for nearly five miles, the valley gradually widening and becoming more cultivated as we advanced. Here I saw, for the first time, a few of the celebrated goats which produce the fine wool, or hair, which is manufactured at Angora into all kinds of beautiful stuffs. They were feeding together with the common goats; but being more delicate, the last severe winter had been fatal to many of them; and the wool, which is generally sold here for twenty piastres the oke, was now much dearer. Soon after twelve, we emerged from the valley into the broad

and extensive plain of Tchibuk-Ova. In this district, or kasé, there are eighty-four hamlets, with from five to fifty houses in each, of which Ravli, where we halted at a quarter after twelve, is the chief. This plain is talked of as the scene of the great battle between Bajazet II. and Tamerlane, A.D. 1402. I was not aware of it at the time, or I should have examined it with greater interest. In the burial-ground, and other parts of the village of Ravli, distant six hours from Akjah Tash, I found many large blocks of hewn stone, evidently intended for some considerable building; as well as architraves, cornices, columns, and sepulchral cippi. All retain distinct marks of the chisel, and appear never to have been finished. The limestone hills we had just left probably contained the quarries which supplied Angora with marble; and these blocks may have been on their way thither, when the wave of destruction rolled over the Roman empire, checking the further progress, and for a time destroying the very existence, of civilization. The rough appearance of many of them justifies this supposition; for otherwise, why should we find so many pedestals and cippi in such an unfinished state, without ornament or inscription?

Friday, September 2.—Ravli to Angora, six hours. We started at half-past seven, and found the morning fresh, and even cool. The road led along the south-east edge of the plain of Tchibuk-Ova for about two miles, with a lazy stream on our right, from which rose numerous plovers, while several coveys of bagrakalas got up from the low hills on the left. Leaving the plain, our course changed to S. by W., over ridges of hills and intermediate valleys, in which horizontal beds of red sandstone conglomerate were resting against the underlying unconformable schistose rocks. At a quarter before ten, after ascending a steep ravine, I found myself upon an elevated plateau of trappean or granitic rocks, against which the red sandstone appeared to have been deposited as in a basin. Crossing this plain, the two remarkable rugged and pointed

hills of Hussein Dagh, which are five miles to the east of Angora, formed a conspicuous feature, bearing S.W. by S., and evidently, from their conical appearance, of volcanic origin.

From this table-land we descended by a wild ravine, in which the igneous rock had lost its granitic character, and passed into porphyritic trap, in places decomposing rapidly, in others extremely hard, and sometimes covered with an efflorescence of sulphur. Leaving the deep valley into which we had descended, the road led us over the N.W. shoulder of Hussein Dagh, from the ridge of which we had an extensive view to the S.W.; while the castle of Engureh, or Angora, with its long walls and numerous towers, stood conspicuous on the summit of a ridge of hills, separated from us by the perpendicular sides of a deep ravine, the town being still concealed from our view. For several miles we descended the sloping sides of this volcanic or igneous mountain, the colour of the rocks of which varied from pink to green, until, at half-past twelve, we reached a stream flowing from the S.E.; and, following its bed amongst the gardens of Angora, we entered a picturesque and winding pass between the craggy rocks of porphyry, surmounted on our left hand by the ruined walls and citadel of Angora. At one we crossed the stream, and, leaving the valley, ascended the narrow streets, to our konak in a large Armenian house in the Acropolis, from the airy balconies of which I enjoyed an extensive view over the open country to the west.

CHAPTER XXIV.

Angora—Its wool—Population—The Kaimakan—Temple of Augustus—Greek inscriptions—Convent of Schismatic Armenians—The gardens—Subterranean passages—Electricity—Catholic Armenians—Turks—Political considerations.

THE antiquities and monuments of Angora have been so frequently described by former travellers, particularly by Pococke and Macdonald Kinneir, that I shall not be tempted to enter into much detail respecting them. The trade of Angora, which in the days of Pococke supported a European factory, consisting chiefly of English merchants, has of late years been entirely destroyed. Its staple commodity was the silky wool or hair of the Angora goat, which, either raw or manufactured, was exported in considerable quantities; owing, however, to the influence of jealous feelings or mistaken views on the part of the government, the Armenian portion of the population, who for a long time had carefully cultivated the growth and production of this wool, were prohibited from keeping the goats any longer, in order that the whole benefit of the trade might be monopolized by their Mahometan masters. The consequence of such a measure was naturally a very considerable falling off in the production and consequent exportation of the article called "tchiftik" by the Turks. The present Pacha has lately relaxed this regulation, but the number of goats is still very limited, compared with what might be maintained on the extensive hills and downs on which they feed. Only 20,000 okes of wool are now exported, besides a small proportion manufactured in Angora, and made up into fine and well-dyed schalis, which are sent chiefly to Constantinople. The other exports of the place are wax, and the yellow berries called "tchekri," which produce the beautiful green dye.

The population of Angora is considerable, and is sometimes stated to exceed that of Tocat. My accounts varied much, one party making 6000 Turkish houses, 4000 Catholic Armenian (of whom Angora is the head-quarters in Asia Minor, whither they fled when driven away from Constantinople a few years ago), 300 Schismatic Armenian, 300 Greek, and about 150 Jewish houses—in all about 11,000; which would give a population of between 50,000 and 60,000 inhabitants. The reports of Catholic Armenians, although nearly the same in gross amount, vary considerably in the detail, and are probably more correct. According to them, Angora contains 9000 Turkish, 1500 Catholic Armenian, 300 Schismatic Armenian, and 300 Greek houses.

As an instance of the modes of communication and doing business in Turkey, I may mention, that on my arrival at Angora I received a bag of money for which I had written from Amasia to a friend at Constantinople. It was brought by a Government Tatar, who had arrived the day before. Fearing that the funds with which I had started from Trebizond might fail me before reaching Smyrna, and finding it impossible to procure money from the Armenian or other bankers, except at exorbitant interest, I wrote to Constantinople for 10,000 piastres, or 100*l*., to meet me here, which were accordingly forwarded to me in gold.

The day after my arrival I visited the Kaimakan, or deputy of the Pacha, who was at Constantinople, and received from him a promise of assistance in my researches, and a chavasse to accompany me about the town. The Kaimakan professed to feel great hostility to the Russians, with whom he was anxious to go to war. He spent half the day in drilling a corps of 200 infantry, and 80 cavalry, with one small gun, in which he was assisted by a European officer, said to be a Pole, and who had been sent to him from Constantinople. The Kaimakan had served at Shumla, where, according to his own account, at the head of 700 Delhis, he had charged and dispersed a corps of 10,000 Russians.

My first visit was to the Temple of Augustus, the inscription on which, the well-known Monumentum Ancyranum,* is one of the most interesting memorials of the age and actions of that Emperor. I was well pleased to find that the report which I had heard at Smyrna, of this building having been demolished by a Turk for the purpose of building a bath with its materials, was altogether false. A small portion of the wall of one side of the cella, about ten feet in width, had been removed, which is not of much consequence. The Latin inscription which is on the inside of the Antæ has not been touched, but it has suffered from the decay or breaking away of the stone, which does not appear to be the result of any wilful injury. Tournefort and Chishull supposed that the holes which have injured the inscriptions were caused by the natives, in order to obtain the metal pins. This is not the case: in the first place no such pins have been used; and, secondly, the holes are not so deep as would have been necessary for the object. On the contrary, the decay appears to have been caused by the circumstance of no cement having been used in the construction of the building, a common practice in many of the most beautiful of the ancient edifices. In order to make the joints between the two courses perfectly close and smooth, which could not be done if the surfaces were in the least convex, or even perfectly level, if left rough, the ancients appear to have made them slightly concave: the consequence of this was, that the outer edges, and particularly the angles, became the only points of contact; thus the whole weight of the superincumbent mass was thrown upon a few points or lines only of the stone, instead of bearing equally upon the whole surface. The necessary effect of this practice, whether the weight was thrown on the edge, or upon a single point in any part of the surface, as must almost always be the case when the stones are not bedded in cement, must equally be to split

* Pococke, Insc. Chishull, Antiquitat. Asiat., p. 165. Tournefort, Lettre XXI.

or break the blocks. This has happened even in the Parthenon, notwithstanding the extraordinary, and at first sight unnecessary, degree to which the inner surfaces of the marble blocks are smoothed and polished.* The bad effects of such a mode of building are but too evident in the Temple of Augustus, where the angles of almost every stone have been crushed, and the cracks radiating in all directions have caused the outer surface of the marble to exfoliate; this appears to have been the sole, or at least the main, cause of the injury which the inscription has received.

The wall at the north end of the cella has also been destroyed, and replaced during the middle ages by a semicircular bema, from whence we may conclude that it has been used as a Greek church. In the neighbourhood of the temple several large fluted columns have been built into the walls of different houses, which were probably derived from the peristyle of the temple. I spent two days in copying the Latin inscription, notwithstanding that it had already been copied by former travellers. Texier, when here, discovered what had already been mentioned by Pococke, a Greek inscription on the outer wall of the cella, of which he only saw the concluding column, the rest being concealed by houses built against the temple. He rightly concluded, however, with his predecessor, that it was a translation of the Latin, but he does not appear to have copied any portion of it; and as it seemed to me to be in a more perfect state of preservation even than the Latin, I entered into a negotiation with the proprietor of the house, which was fortunately unoccupied at the time, in order to obtain his permission to pull down the wall, which was built against the temple. I sent Hafiz Agha to find him out and conduct the treaty, and in the course of two days had the satisfaction of finding that he had agreed to my proposal. I had hardly dared to hope that the Mahometan would have allowed a Giaour to take down the wall of his house for such a purpose.

On examining my prize, for such I could not help con-

* See before, p. 39.

sidering it, there appeared five more columns of the Greek inscription almost perfect, and supplying many of the lacunæ in the Latin, the latter part of which is very defective:* unfortunately, these six columns did not contain more than a third of the whole; the remainder was still concealed behind two other houses which were inhabited; and when, after some delay in removing the female part of the family, I was admitted, I found that the inscription was not protected by a mud wall as in the former case, but that the bare wall of the temple was exposed in the interior of the house, so that the inscription has been in many places entirely obliterated.

Among the interesting facts revealed by this discovery of the Greek translation is the almost perfect catalogue of the new buildings erected by Augustus, which in the Latin version is extremely faulty. These new buildings were "the temples of Mars, of Jupiter Tonans and Triumphans, of Apollo, of Julius Quirinus, of Minerva, of Juno, of Jupiter Eleutherius, of the heroes of the country, of Juventus, of the Mother of the Gods; the Chalcidicum, the Forum Augustum, the Theatre of Marcellus, the Basilica Julia, the grove of the Cæsars, the portico on the Palatine, the portico in the Hippodrome of Flaminius." He also restored the Capitol, eighty-two temples, the Via Flaminia, the aqueducts, and other buildings for public spectacles, besides presenting gifts to the colonial and Italian cities, which had been destroyed by earthquakes and by fires.

There is another interesting inscription in Greek on the front of one of the Antæ, from which it appears that the temple was dedicated to Augustus and Rome.† The circumstance of its having been thus dedicated renders it highly probable that it is the temple alluded to in the decree of Augustus, quoted by Josephus,‡ although Chishull wishes to read ἀργύρῃ instead of ἀγκύρῃ, and supposes

* See Appendix, No. 102. † See Appendix, No. 103.

‡ Joseph. Antiq., lib. xvi, 6.

that the temple alluded to was at Pergamus and not at Angora.* This inscription contains also a list of numerous kings and tetrarchs of Galatia and other neighbouring kingdoms, who had made sacrifices or instituted games in honour of the Emperor, or at the dedication of the temple. Some of the names are curious and interesting from their peculiar Gallic and even Gothic forms.

The collection of inscriptions made during my stay at Angora was very numerous; many of them never before published. They were met with in all parts of the town, in the gateways and court-yards of private houses, but chiefly in the walls of the citadel.† This is defended by a triple line of fortifications, all the gates of which are locked at night. The outer wall encircles a very large space, in which are upwards of 4000 or 5000 inhabitants, many of whom are Armenians; and is full of inscriptions; but it is the wall of the second or middle line, called the Utch Kaléh, which contains most. This is strengthened by numerous square towers, which, as well as the intermediate curtains, are in some cases built from top to bottom with fragments of white marble, once portions of bas-reliefs, inscriptions, funereal cippi with garlands, and the caput bovis, caryatides, columns and fragments of architraves, with parts of dedicatory inscriptions, resembling, indeed, very much the walls of a rich museum. The upper castle on the pinnacle of the rock is called the Ak Kaléh (White Castle); it contains but few blocks of marble, being built almost entirely of dark porphyritic trap, of which the hill consists; but some enormous blocks of this stone have the appearance of having belonged to ancient buildings. Here I also saw two gigantic statues of lions, couchant like those of Kalaijik.

During my stay at Angora I had no reason to complain of want of hospitality on the part either of the Turks or Armenians; the latter freely admitted me into their houses to copy inscriptions; and in one case I was obliged to have

* Chis. Ant. Asiat., p. 166. † See Appendix, Nos. 104 to 128, and 134 to 138.

recourse to an Armenian house to read a long inscription on the wall of the opposite castle by means of a telescope from the window. I was generally accompanied by a German physician of the name of Riga, in the service of the Pacha, who had been many years settled in Angora, and was married to an Armenian; but his pay from the Pacha was only 500 piastres a month. It is contrary to all the habits and practices of Turkish society or domestic life to pay an inferior; he is merely lodged and fed, and occasionally receives a present. The usual mode by which a Pacha, Agha, or Governor remunerates his followers, is by sending them to some neighbouring town or district, to convey an order, to receive taxes, or to settle a dispute; in these cases the town, village, or district is charged with the payment of a certain sum to the bearer, according to the distance and importance of the business, the amount being generally written on the order. This explains how the Turkish governors are enabled to support so many and such large establishments.

The doctor and another gentleman accompanied me one day to visit the Convent of Schismatic Armenians, situated a few miles to the north of Angora; and thence to a spot called the Gardens, in a picturesque glen, and watered by a small stream, the whole of which is absorbed in fertilizing the lower part of the ravine. At the Convent we found five or six monks, who seemed to lead a comfortable and tranquil life; but their manners were rude and coarse, and their information on all points most limited. The bishop was absent; the authority of the convent is said to extend over a large part of Asia Minor as far as Tocat; but it is impossible to feel respect for men who had recourse to the vilest intrigues, in order to procure the banishment of their Catholic countrymen from Constantinople in 1829 and 1830. Their church is neat, and rather handsomely decorated with gilding, paintings, and coloured tiles, which I was told are made at Kiutahiyah. All European merchants who die at Angora are buried in the cemetery

attached to the convent, and several English names attest the former existence of a flourishing factory. I also copied here many Greek and Latin inscriptions.* In the chapel a curious window was pointed out to me, which appeared to be a yellow transparent alabaster. I believe it is called *pierre speculaire*.

On our way to the Gardens we halted at the vineyard of an Armenian merchant, where the horses were held by a poor Pole, whose life had been a series of sad and interesting adventures. Serving under Buonaparte in the campaign of 1812, he was taken prisoner by the Russians at the battle of Berezina; and after spending some time in Siberia was placed in a Russian regiment, and sent to the Caucasus to fight against the Circassians. Here he deserted, and was sold and resold as a slave for several years, until he fell into the hands of a Turk, who brought him to Angora, where he worked as a gardener for some time. Two years ago his Turkish master gave him his liberty.

At the Gardens, where we found a cool retreat from the sun, and enjoyed the Turkish luxury of reclining on carpets by the side of a small brook, we met with another remarkable character, an Armenian recluse, who lives here by himself, cultivating his garden with his own hands. The Pacha of Angora is said to have a great regard for him, and constantly visits him in his retirement. He was formerly one of the richest Armenian bankers at Constantinople, and director of the mint. Notwithstanding his enormous wealth, his extravagance and generosity enabled him to get rid of his whole fortune; he has since retired to this spot, where he leads the life of a hermit, only visiting the town to sell the produce of his garden.

The greatest curiosities at Angora in the eyes of the inhabitants are the many subterranean passages, which extend far and wide in various directions. One is said to lead from the citadel to the river; but, although I had the Pacha's permission to visit it, the keys of the iron gate were

* See Appendix, Nos. 129—133.

nowhere to be found, and I lost the opportunity of examining this curious relic of ancient times, and of enjoying the extensive view from the castle. However I entered one of the passages in the town, and found it arched over with bricks, but being blocked up with loose stones, I had no means of seeing how far it extended. I could not subscribe to the credulity of Dr. Riga, who declared that some of them were continued for several miles outside the town. One of the Armenian priests whom I met at the Catholic bishop's said that they were eight leagues long, and another, warming with the excitement of this mysterious subject, immediately added, that there was one which extended two days' journey. The doctor assured me that the passage which I had visited was blocked up in consequence of a bull, which had lost his way, and had entered the other end several miles off, suddenly making his appearance in the cellar, to the horror and alarm of the proprietor and his family, who, seeing this huge horned beast in the cellar, took it for his satanic majesty in person, and forthwith blocked up the entrance. In short, the tales which they related respecting these passages were as extraordinary as the fables, which both Armenians and Turks believe, respecting hidden treasures. These latter far exceed what we generally hear respecting the credulity of savages, and can, I think, only be accounted for on the supposition that, as their waking thoughts are constantly occupied with the subject, their dreams also are not unfrequently tinctured with the same ideas, and that by confounding the two, they mix up the results of their dreams with the facts of daily life.

I was detained at Angora longer than I had intended by a slight illness, and spent one evening during my stay at the house of another European physician, Dr. Leonardi. He has been many years in this country, has married an Armenian wife, and wears the Oriental dress. He has a large family, and several young and beautiful daughters; I was much struck with the richness and elegance of their costume; for they were dressed in all their finery

and wealth to do honour to the visit of an English Beyzadeh. The dress itself consisted of a long and tight petticoat of gold brocade, over which was a closely-fitting velvet jacket covered with gold embroidery, with large open sleeves. Round their heads they wore bandeaux of pearls and other jewels, with strings of gold coins, besides armlets and bracelets of the same description, and long chains of sequins round their necks; the eldest too had several strings of gold coins intertwined with, or attached to the ends of her long and flowing tresses; these have generally been given to them, and accumulating by degrees, are considered as their own property, and when they marry constitute their dowry. Dr. Leonardi himself was agreeable and full of anecdote: he narrated some wonderful stories of adventures which had befallen him in Syria, when travelling with Achmet Agha of Hadji Kieui, whose Christian name I now learnt was Achille Guerra.

One of the most remarkable phænomena which I observed in Angora was the great degree of electricity which seemed to pervade everything. I observed it particularly in silk handkerchiefs, linen, and in woollen stuffs. At times when I went to bed in the dark the sparks which were emitted from the blankets gave it the appearance of a sheet of fire; when I took up a silk handkerchief, the crackling noise would resemble that of breaking a handful of dried leaves or grass; and on one or two occasions I clearly felt my hands and fingers tingle from the electric fluid. I could only attribute it to the extreme dryness of the atmosphere, and momentary friction. I did not observe that it was at all influenced by wind; the phænomena were the same whether by night or by day, in wind or calm. Not a cloud was visible during the whole of my stay.

I have already mentioned that Angora is the chief residence of the Catholic Armenians in the Turkish empire. I paid a visit to their bishop, a quiet intelligent old man, and found several other priests with him, all of whom under-

stood a little Italian, most of them having been educated in Italy; their easy and European manners, and superior intelligence, contrasted strangely with the stiff Turkish formality of their schismatic brethren. All their priests are now obliged to go to Rome, where their principal seminary is situated, before they can be ordained. Formerly this seminary was on Mount Lebanon, where they now only keep up a small convent. The present system has at least this advantage, that it brings them in direct contact with a civilized world, and with civilized ideas. The principal points on which the schismatic Armenians differ from the Catholics are the following:—

1. They do not acknowledge any of the Popes.
2. They deny that the Holy Ghost proceeds from the Father and the Son, but from the Father only.
3. They do not admit a Purgatory.
4. They assert that the Saviour died not only in his human person, but in his divine person also.

It is singular that the Catholic Armenians are not allowed to hold land, whereas the Schismatics are permitted to possess a little, by which they support their convent. Yet, notwithstanding their privations, the Catholics enjoyed the greatest reputation for charity, and were decidedly the most wealthy of the two communities.

Great alarm and excitement prevailed amongst the Armenian population during my stay here, in consequence of the arbitrary behaviour of the Turks, who had lately got possession of several Armenian children, and compelled them, by force or intimidation, to abjure their religion. One Imaum was particularly complained of as having shown great activity in this rage for making proselytes. For some days it was uncertain what was become of the boys; but before I left the town I understood that the Turks had succeeded in circumcising two of them. It was said that the Imaum, finding a stir was made about them, and fearing that, if the government was compelled to interfere, he might

lose his prey, went home and at once operated upon them himself.

Every day's experience confirmed me in the idea that it would be far preferable for humanity, civilization, and commerce, if the Russians were in possession of this country instead of the Turks. That, however, is of course out of the question; the other European powers could never consent to such aggrandisement on the part of Russia; but might not other means be devised to get rid of the Turks, whose existence in Europe in the nineteenth century is a disgrace to all Christian nations? They should be driven back to their natural boundaries, and the Mahometan territories should be limited to Syria, Arabia, Egypt, Persia, and Tartary; Roumelia and Constantinople should be restored to the Greeks, who, though now too weak to support themselves, would then possess a capital worthy of their name, instead of the unhealthy spot which is now the seat of government. They might also possess the islands, and perhaps the western shore of Asia Minor, and an intermediate Armenian kingdom might be formed between Mahometanism and the Europeans; their Christian religion and Asiatic manners point out the Armenians as admirably adapted for such a position. This kingdom would include Armenia, Cappadocia, Pontus, Paphlagonia, Galatia, and Phrygia; and under its commercial energy and perseverance the great resources of Asia Minor would soon be developed, and rendered serviceable to mankind. On the other hand, the Turks, reduced to their native wilds in Tartary, might perhaps recover from the moral degradation in which they are now steeped; and, with a more healthy state of feeling, a way might be prepared for their admission in the fulness of time to the pale of Christianity.

CHAPTER XXV.

Leave Angora—Baluk Kouyoumji—Hill fort of Assarli Kaiya—Beyjayes—Cross the Sangarius—Its course and sources—Meulk—Ancient Inscription—Ortou—Aslanli—Large Bustards—Sevri Hissar—Granite Mountains—Bala Hissar, anc. Pessinus—Inscriptions—Tchander—Cross the Sangarius—Alekiam, anc. Orcistus—Hamza Hadji—Hergan Kaléh, anc. Amorium.

TUESDAY, September 13.—After a stay of eleven days in Angora, I started for Sevri Hissar, distant twenty-four hours; taking the southern and least frequented road, instead of the more beaten track along the valley, hoping to be thus enabled to see a portion of the district of the Haimaneh. The ruined outer wall through which we passed was almost entirely composed, particularly near the gateway, of fragments of columns, marble architraves, and other remains of ancient buildings. Our direction was W.S.W. the whole day, over successive ridges and intervening streams flowing N. and N.N.W. into the rivers of Angora and Chibouk Ova. We had not left the city half a mile before we began ascending amid the low undulations of gravel and diluvium, from whence we had a fine view of the town, spread over the steep sides of the hills.

This undulating country is perfectly uncultivated. No traces of vegetation were visible, except in the dried-up stems of a few thorny plants and flowers, which cover the ground instead of grass. We fell in with one flock of sheep and goats, amongst which were a few of the fine breed of Angora. A few miles further on, a hard, compact limestone, dipping N.W. 30°, rose in insulated knolls above the surface. It was in parts fractured, and brittle, but it contained a few marine shells, and in some places was much contorted. At the twelfth mile from Angora the same character of country still prevailed, viz. gently-undulating

hills, covered with gravel and diluvial pebbles, chiefly of limestone and flint, still bleak and barren; for not a tree was to be seen, and scarcely a trace of cultivation. Only in the bottoms of the valleys was there a little arable land, and occasionally a melon or a cucumber-garden, where a supply of water could be obtained. At the fourteenth mile we descended to and crossed a narrow valley, down which a small stream flowed W. by N.; and, after ascending the low hills on the opposite side, reached a mass of slightly columnar trachyte, which bursts out at the east end of an oblong, flat-topped hill, on the summit of which I found many fragments of pottery. The ground about it was strewed with angular masses of trachyte, which rises up through highly-inclined beds of limestone, upheaved in a dome-shaped form, and inclining from the trachyte with a quâquâversal dip; this dip is well exposed at the western extremity of the hill, where we arrived at the small village of Baluk Kouyoumji, eighteen miles from Angora. To the south of this village is a deep and narrow gorge in the trachytic rock, through which a small stream flows from Assarli, and waters the plain to the N.W.

It was quite evident that the trachyte had been upheaved subsequently to the deposition of the limestone, which was thin-bedded, compact scaglia, in part very silicious, and containing nodular and tabular flint. In some places, indeed, the flint or chert appears as a regular stratum, alternating with the limestone. From the mineralogical character of this rock, which is less crystalline than that seen in the former part of the day's journey, it is probably of more recent origin; but without proper sections I was unable to ascertain the fact.

Wednesday, September 14.—I started early to visit some ruins on the summit of a high, conical hill, called Assarli Kaiya, three miles off to the south. On our way we put up several coveys of bagrakalas; and, proceeding over barren and rocky ground, we reached the summit of the hill in an hour. Here I found the curious remains of a very

remarkable fortress, a kind of hill-fort, evidently of great antiquity. The summit of the hill consists of red, porphyritic trachyte, and is completely covered with these rude remains, which are surrounded by an almost circular wall about ten feet high, of rude blocks of stone of various sizes; there are also some remains of another outer wall on the S.E. side. The whole of the interior is divided into many small apartments or chambers, constituting a perfect labyrinth, and without streets or passages to lead from one to the other. It is certainly not a Turkish work, nor does it resemble anything Byzantine which I have ever seen. It is called Assarli Kaiya, from a large village called Assarli Kieui, about a mile off to the east, and, being of considerable elevation, and forming a conspicuous point from all the surrounding country, appears to have been the principal focus or centre of the trachytic outburst in this district. On referring to Livy's account of the campaign of Manlius against the Gauls before he reached Ancyra,* it appears to agree precisely with the description of Mount Olympus, where the Tolistoboii had taken refuge and defended themselves. It is evident that Mount Olympus was an insulated hill, and not a mountain district like the country to the north of Ancyra, where it is generally placed.

After returning to Baluk Kouyoumji, I started soon after ten for Beyjayes, distant six hours. For the first six miles our course was due west, then six miles W. by S., and five miles W.S.W. Soon after starting we crossed the trachyte, and one mile farther passed a remarkable ridge or mass of black compact slightly-columnar trachyte, cutting through the limestone, and rising almost perpendicularly to a height of 200 or 300 feet on our right. It terminates in two separate peaks, one of which is so rugged that at a distance it has the appearance of a ruined castle. From thence we descended the valley along the slope of hills of marly limestone, until, leaving the river on our right, we entered an

* Liv. lib. xxxviii. c. 20.

extensive plain, bounded on all sides by hills remarkable for the distinct lines of colour which showed their various stratification, and amongst which red and white marls were predominant. The country was bleak and barren, and formed part of the district of Haimaneh, notorious for the many wandering tribes of Kurds and Turcomans by whom it is infested. At half-past twelve, changing our direction from W. to W. by S., we descended between hills of scaglia limestone into a long and narrow plain, covered, as well as the low hills by which it was bounded, with absinthe, which, when bruised as we passed along, filled the air with its fragrant smell.

To the E. and S.E. I observed several detached flat table-lands of horizontal limestone, beyond which the trachytic ridge or peak of Assarli Kaiya rose conspicuous. We continued for several miles along the S.E. side of the plain, and at half-past two we passed a large stone building, near the centre of the plain, apparently a deserted khan. A few minutes before four we reached Beyjayes, where the peasants were employed stowing away their corn, by burying it in pits lined with straw outside the village. The grain is poured in quite loose, and covered over with a layer of straw, after which the earth is replaced as before. There was no one, however, in the village, and we were obliged to go on to the yaila, a mile and a half farther to the N.W. This consisted of a few miserable stone huts on the summit of an elevated ridge of hills; its only peculiarities being heavy wooden frames before each house for making carpets. The inhabitants complained of the wolves with which the country was infested, adding that they attack the villages sometimes in troops, and carry off or destroy their animals.

Thursday, Sept. 15.—Beyjayes to Meulk seven hours. We started at forty minutes after seven, and for a mile proceeded W. along the summit of the ridge, whence we descended by a steep ravine over igneous rocks, until we came upon white earthy limestone, capped with columnar basalt.

On reaching the plain, which was covered with thick beds of diluvial gravel, I found in the deep bed of a torrent many fragments of fossils washed out of the rocks above; they were chiefly Ostrea, and a large conical shell, a species of Turritella, mixed with pebbles of chalk, limestone, and basalt imbedded in sand, but I could not find them *in situ*. Crossing this undulating and deserted plain in a W. by S. direction for nearly six miles, we reached at a quarter after ten the banks of the Sakaria or Sangarius, here a deep but narrow stream, winding lazily along the eastern edge of a marshy plain, covered with reeds, and stretching away far towards the north. Its general direction through these plains was from S.S.W. to N.N.E.; but our knowledge of its sources and the greater part of its course is still very imperfect: from what I saw of it on this occasion, and afterwards, when to the south of Sevri Hissar, it is clear that no true idea can be formed of it from the maps hitherto published.

The extensive pastures on the banks of this river were formerly a portion of the district in which the Turcoman tribes who wandered towards the west after the overthrow of the Sultans of Iconium established themselves under Othman, until they pushed their conquests beyond the passes of Olympus, and obtained possession of the town of Brusa.

After traversing the plain obliquely for nearly two miles in a S.W. direction, we halted for a cup of coffee near a guard-hut, after which we crossed the river, and ascended the chalky hills, which form the western boundary of the plain; the stratification of these hills, containing large masses of saccharine gypsum or selenite, is perfectly horizontal. The guards here told me that there was no direct communication across the Haimaneh, that there were no villages, and that the country was only inhabited by Kurds. They added that all the traffic between Angora and Koniah passes through Sevri Hissar and Bolawadun. The sources of the Sakaria were stated to be twelve hours distant from Sevri Hissar, where it flows at once a considerable river from copious springs.

At half-past one we had reached the most elevated portion of this perfectly level table-land, whence the view was singularly striking; in front were several lines of level plateaux or table-lands, with steep waterworn cliffs, the sides of valleys opening into a large plain to the N.W.; beyond which to the W. and S.W., at a distance of ten or twelve miles, rose, like an island in the sea, a rugged chain of mountains with a broken and picturesque outline. To the S. and S.E. the view was unbroken as far as the eye could see, the country as level as the ocean, and not a hill visible above the horizon. Suddenly in the midst of these horizontal beds we came upon a hard mass of amygdaloïdal trap or basalt protruded through the chalk formation, which dipped rapidly to the west. A few minutes before three, after crossing a broad valley two or three miles wide extending from S. to N., and ascending a picturesque and well-cultivated lateral valley, we reached the village of Meulk, situated on its southern side.

About half a mile E.N.E. of the village is a curious and extensive cavern, excavated in one of the upper beds of earthy limestone near the summit of the table-land. The stratum which has been cut away is about four feet six inches thick, which is consequently the height of the cavern. The bed above it is much harder, while those below are soft and earthy. Three separate passages radiate from the principal or outer opening, all of which lead to several circular chambers cut apparently without the slightest attempt at regularity or uniformity. From the summit of the hill above the cavern I could clearly trace the extent of the volcanic or trappean outburst over which I had just passed. To the S.W. was a high range of hills, and to the S S.W. a still more distant one, the whole of which is called Günesch Dagh, apparently the Mons Dindymus of the ancients. The castle of Sevri Hissar was visible to the W S.W., on the summit of a lofty serrated ridge of hills, while to the S. and S.E. not a single peakor mountain was visible above the horizon.

The inhabitants of the village talked of ruins in all directions; but on further inquiry they appeared to be merely the sites of Turkish villages destroyed by the wandering Turcomans; many of these are alluded to by Macdonald Kinneir.* The only place which seemed likely to prove of any interest was called Aslanli, three hours distant, and not far from my road on the following day. In the evening there was a violent thunderstorm, and the first rain we had had since leaving Tireboli.

Friday, Sept. 16.—While the baggage-horses were being laden, I copied a Latin inscription from a rough marble column.† From its allusion to persons who had restored the roads through various provinces of Asia Minor, it was probably a milestone from one of the ancient roads from Ancyra to Dorylæum or to Germa. I also saw many sculptured and ornamental blocks of marble in the burial-ground.

We started at a quarter before eight, and after a ride of four miles, W.S.W., up a fertile valley, the sides of which were studded with wild pear-trees, we reached the village of Ortou soon after nine; the hill to the west is crowned with the ruins of an old Turkish castle, and many fragments of sculpture lie scattered about the place. Here I procured a guide to conduct me to the ruins of Aslanli, about four miles to the S. by E. The road led to the summit of the table-land up a narrow valley, in which the different horizontal strata formed terraces and steps on either side, gradually diminishing in number and in height until we reached the dreary plain, in places slightly undulating.

Three miles from Ortou I found lying near the roadside a large funereal cippus of white marble, surrounded with a handsome cornice, having on each side a chaplet or garland, with a rose in the centre. There was no inscription upon it, and it seemed never to have been finished. Half a mile farther south we came upon the remains of a ruined

* Asia Minor, p. 50. † See Appendix, No. 139.

town; and in the walls of the numerous houses, almost entirely built of stone, as well as the neighbouring enclosures, I found many square-hewn blocks of marble, sepulchral monuments like that just described, and other fragments, amongst which were several inscribed stones.* Two of them are upon handsome and well-executed monuments, but have suffered much from long exposure. This town or village appears to have been built out of the ruins of a more ancient city. But there is no evidence of its name, and the fragments appeared to me too numerous to have been transported from any distant town, such as Pessinus, which I afterwards found at Bala Hissar, at least twelve miles off on the other slope of Mount Dindymus. Germa also is too distant to have supplied them.

As we were leaving this abandoned village we put up a numerous flock of bustards of the largest species; their colour was brown, with very long necks, the breasts white, and white also under the wing. I was told they were not uncommon in these vast plains; but this was the first time I had seen them. To the east of this ruined place was a pool with a fountain of cold water, and round it, at a distance of fifty or sixty yards, a semicircular wall was built on the west side. What remained was very low, and I was unable to satisfy myself as to its purpose, for it was too extensive and too slight for the substruction of a theatre.

Having returned to Ortou, we started for Sevri Hissar soon after one, crossing a barren plain, and then ascending the ridge of hills to the west, consisting of talcose and yellow micaceous shales, with veins and masses of quartz, interstratified with beds of crystalline limestone with an almost vertical dip. On the western side of this ridge the hills were less bare, and several patches of oak-coppice relieved their uniformity. On reaching the valley the road led S.W. for three or four miles at the back of the rugged and serrated ridge of Sevri Hissar, along a stream, which in the rainy season fills a wide torrent-bed, and

* See Appendix, Nos. 140—142.

appears to fall into the valley of Meulk above Ortou. At three we changed our course to west, in order to round the southern shoulder of the ridge of Sevri Hissar, which consists of a very fine-grained black and white granite. A rocky and rugged road led us amidst well-stocked vineyards round the hills, after which a mile and a half due north brought us to the town of Sevri Hissar, most picturesquely situated at the western foot of the singular and detached ridge, whose rugged rocks almost overhang the town, and close round it in a crescent shape on the N.E.; so that, while protected from every cooling breeze, it is exposed to the direct and reflected rays of the sun; the heat was excessive, and the dried-up vegetation, unrefreshed by streams, added to the parched appearance of the place. The town covers a large space of ground, containing 2000 Turkish houses, and 300 belonging to Schismatic Armenians; the houses are all flat-roofed, and, being covered with hard clay, can scarcely be distinguished from the surrounding country.

Saturday, September 17.—Under the guidance of an old Armenian, who combined the profession of coin-vender with that of cicerone, I proceeded to Bala Hissar, the ruins of which, situated at a distance of nine or ten miles to the S.S.E. of Sevri Hissar, M. Texier had already recognised as those of Pessinus. On leaving the last spur of the granite range south of Sevri Hissar, we entered an undulating plain sloping to the S.W., covered with pebbles of crystalline limestone derived from the mountains to the east, and soon came upon the rock itself *in situ*. At the fifth mile we had left all traces of these metamorphic rocks, and were passing along the summit of an extensive plateau of white cretaceous limestone, apparently lacustrine, cut up by deep ravines, and containing numerous casts of Limnœa and Planorbis; beyond which the lofty chains of Emir Dagh, bearing S. by W., and Sultan Dagh, near Aksheher, to the S.S.E., were visible. At the seventh mile we began to descend from the plateau, leaving the lofty mountains on

our left about three or four miles off. This range is terminated by a mountain of considerable elevation, which rises to a peak of bold and striking character, and which I have no doubt is the Mons Dindymus of the ancients, at the foot of which Pessinus was situated. At the ninth mile our road led along a flat and narrow ridge falling to a deep ravine on either side. Several fragments of the covers of large sarcophagi, and other marble blocks lying near the roadside, announced our approach to the ruins.

After a ride of two hours and a half we reached the Acropolis, situated at the southern extremity of the narrow plateau, from whence the ground fell rapidly on all sides, except towards the north. Many portions of a well-built marble wall by which it has been surrounded are still standing, but some parts have been repaired with the ruins of other buildings and fragments of sepulchral monuments. Descending from hence E.S.E. towards the village, the road led through an extensive burial-ground, a storehouse of broken shafts of columns of various characters and dimensions, some of which are plain, and others deeply fluted. Every step we advanced gave evidence of the importance and magnificence of the public buildings with which the city which once occupied this site must have been adorned, and convinced me that it was one of no mean repute in the former history of Asia Minor. Advancing towards the village, the sloping sides of the hill are covered with heaps of marble blocks and broken columns, sculptured architraves and friezes, each of which marks the site of a prostrate temple, a triumphal arch, or other public edifice. Near the village are also the remains of an extensive portico, or stoa, of which many columns are still *in situ*, and the front of a temple standing on a rustic basement with six or seven fluted columns facing the S.W.

The modern village is situated in the bottom of the valley near the confluence of three ravines which cut through the cretaceous limestone: one of these comes from the N. by W.; another, which is the most considerable as

flowing from Mount Dindymus, and is watered in some seasons by a small stream, comes from the N.N.E.; and the third from the E. Below the village the valley widens considerably, and extends for five or six miles in a S.S.E. direction, where I was informed it joins the Sangarius or Sakaria. Immediately to the east of the village are many substructions and walls composed of marble blocks marking the sites of houses and the lines of streets, similar to what I afterwards found on the hill below; and about 250 yards up the valley, also to the east, are the remains of the theatre facing N.E. The marble seats of the Cavea were almost all there, chiefly laid in a hollow on the hill-side; but the scena was entirely gone, its site being only marked by a low mound of earth and rubbish. As far as I could judge from its ruined state, it was in extent more than a semicircle, the sides of the Cavea appearing to open out, and to diverge, instead of having the excess beyond the semicircle formed by producing the same curve at either extremity, as is usual in the Asiatic theatres, or of continuing the sides parallel to each other, as in the theatres of European Greece.* In the colonnade near the village were several angular columns of a peculiar form.

Below the village I followed the valley to the S. by W. for about a mile, where it makes a bend to the S. by E. The hills were covered with many blocks of marble and broken columns lying about in confused masses on both sides, but particularly towards the east. At the farthest point which I reached were the remains of several tombs and sarcophagi, solid and well carved. One of the latter, which had been lately dug up, was very large and perfect; and near it was the architrave of a handsome and well-sculptured tomb, also recently discovered, with an inscription on it,† remarkable for the use of the word Sagarius, to whom the tomb had been erected by his wife, Euphrosyne. The fragments of marble which had been buried underground were well

* See Leake's Tour in Asia Minor, p. 322.

† See Appendix, No. 143.

preserved, but those which were exposed had suffered severely, and were rapidly decomposing. Some of the tombs, decorated with chaplets and roses, were of the same style and character as those which I had seen at Aslanli, which may have been brought from these ruins; others are carved on one side, so as to represent the panels and compartments of a door. On the opposite or western side of the valley were also the foundations of buildings, and fallen columns, many of these last very deeply fluted; and some which I at first supposed to be plain, proved on clearing away the soil to be also fluted. The inscription No. 144 is the fragment of a dedication copied from a broken architrave, with letters five or six inches in length; those which had been underground were remarkably well preserved. Before leaving the village I spent some time in copying the inscriptions Nos. 145 and 146, and in digging up several pedestals which I had hoped might have furnished me with others, but in vain.

These ruins are undoubtedly of great interest from their extent, but such is their state of devastation, that they are more interesting to the geographer than to the antiquary. I have no doubt that they mark the site of Pessinus, the capital of that tribe of the Gauls who were called the Tolistoboii; they were celebrated for the worship of the goddess Rhea or Cybele, whose statue was removed by the Romans B.C. 202, the Sibylline oracles having declared that the safety of the state depended upon its removal to Rome. We also learn, from Livy's account of the campaign of Manlius against the Gauls, that the worship of Cybele, the Magna Mater, was still observed in Pessinus after its occupation by the Gauls.*

Before proceeding to state the grounds on which I think that Pessinus must have stood here, and the consequences of that position with regard to the comparative geography of this part of Asia Minor, I may mention two

* Livius, xxix. 10–12; xxxvii. 18. Strabo, xii. p. 567. Steph. Byz. v. Ἀγδίβυζα; v. Πεσσινοῦς. Herodian, i. 11. Ammian. Marcell. xxii. 22. Polybius, Frag. xx. 4. Pausanias, Attic. c. 4. Hierocles, p. 697.

important geographical facts:—1. I was informed by the people of Bala Hissar that between three and four hours (nine or ten miles) to the E. or E. by S. there is a place called Yerma with considerable ruins. This is clearly the town through which Macdonald Kinneir passed on his way from Sevri Hissar to Angora, and which he justly recognised as the site of Germa. 2. I was told both at Bala Hissar and at Sevri Hissar that the Sakaria flows from west to east, about four or five miles to the south of Pessinus, taking its rise in a lake eight hours S.W. of Sevri Hissar; and I was also told that I should cross it in my way from Sevri Hissar to Afiom Kara Hissar. I will here only so far anticipate my journal as to state that after leaving Sevri Hissar I did cross a deep, clear, and beautiful river, full of fish, at a place called Tchander, about fifteen miles S.S.W. of Sevri Hissar. Now, the existence of this southern branch of the Sangarius, flowing from the west and to the south of Pessinus, has been omitted in all our maps; and it is remarkable that Pococke, who must have crossed it near Alekiam or Orcistus, should not have mentioned it. This is of great importance in serving to explain many of the apparent contradictions regarding the site of Pessinus, showing that although the city was to the north of the river, it was yet considerably to the south of that part of the river, where it has hitherto been looked for, and on its left instead of right bank; thereby reconciling the conflicting testimonies of Polybius and Livy with regard to the march of Manlius.*

We also find that, although called in question by Colonel Leake, the Antonine Itinerary is correct in placing Germa 16 M. P. on the road from Pessinus to Ancyra.† It

* See Leake's Asia Minor, p. 84. Cramer, Asia Minor, vol. ii. p. 87.

† Iter a Pessinunte Ancyram . . . 99 M. P.

Sic :	Germa . . .	16
	Vindia . . .	24
	Papira . . .	32
	Ancyra . . .	27
		99

will be seen that the direct road from Pessinus to Ancyra, according to the map, must have been round the southern foot of Mount Dindymus, and consequently through the place where Kinneir places Germa, and where my informant confirmed its existence, which is to the N. instead of the S.W. of the Sangarius.

In describing the march of the Roman army, Livy states that on reaching the Sangarius, Manlius ordered a bridge to be constructed, the river being unfordable; and that, when he had crossed over, and was marching along its banks, he met a procession of the priests of Cybele, who had come from Pessinus to meet him, and that he halted for the day on the spot where he fell in with them, and on the next day marched to Gordium. Nothing can be more clear than this description with the new map before us, and it shows that there is no necessity for supposing, what certainly would have been a difficulty, that the priests had also crossed the river before they could meet the Roman General.

It may also be remarked that this position of Pessinus agrees better with the account given by Ammianus of the march of Julian the Apostate from Nicæa than the more northern one assigned to it either by Colonel Leake or Dr. Cramer. Julian, having followed the great road as far as the confines of Gallogræcia, turned to the right to visit Pessinus. Now, in all former maps Pessinus is laid down so close to this great road, that it would have been beneath the notice of the historian to mention the fact of his going half a mile out of his way; but when we find that it is fifteen or twenty miles to the south, a day's journey out of his way, it becomes a matter more worthy of note.

According to Strabo,* the sources of the Sangarius were said to be at a small place called Sangia, 150 stadia from Pessinus, which has been considered as militating against the hitherto assumed position of this city; but if Pessinus stood at Bala Hissar, the account of Strabo will be tolerably correct with regard to the sources of at least one branch of

* Strabo, lib. xii. c. 3, p. 543.

this important river. I have said that we crossed the Sakaria at Tchander, which is distant about fifteen miles W. of Pessinus: while there I inquired of the Turcoman peasants respecting the sources of the river, and was told that they were in a lake about four hours off to the west; besides which there is another branch which flows from the S. in the direction of Emir Dagh, the sources of which may be nearer.

On the whole then I think the position of Pessinus is based on satisfactory evidence; and confirmed as it is by the subsequent discovery of an inscription at Sevri Hissar,* it will serve as an important key towards verifying the geography of this part of Asia Minor; and we may soon hope to be able to trace the whole march of the Roman army under Manlius, besides ascertaining the sites of Gordium and Amorium,† and many other less important towns.

Sunday, September 18.—I halted this day at Sevri Hissar, and spent some time in the afternoon copying inscriptions in the town, amongst which was No. 147, which my Armenian cicerone stated had been brought from Bala Hissar, with all the other antiquities in the town. It contained the name of ΤΟΛΙΣΤΟΒΩ . . . ΠΕΣΣΙΝΟΥΝΤΙΩΝ, the very place I was in search of, and completely confirmed my conjecture respecting the site of Pessinus.‡ After paying a short visit to the Governor, I prepared to ascend the highest summit of the ridge which rises immediately behind the town. A little below the top are the extensive remains of an old Turkish castle, perched upon a rocky eminence; this fortress formerly belonged to Yasiji Oglu Bey, who was for nineteen years the tyrant and Dere Bey of Sevri Hissar; after many vain attempts on the part of the government to seize and punish him for his cruelty and rapacious conduct, Choppan Oglu at

* See Appendix, No. 147.

† Colonel Leake, Tour in Asia Minor, pp. 78–86.

‡ On referring to the inscriptions in Macdonald Kinneir's work, I observe that in his copy of this inscription he has left out the very line which contained the name of the city.

length caught him about twenty years ago, beheaded him, and demolished his stronghold, and Sevri Hissar is now a dependency of Brusa. I contrived with some difficulty and danger to scale the insulated granite peak which towers above the ruins, from whence the view was very grand and striking. Mount Dindymus bore S.E., and the highest point of Emir Dagh, S.S.W.; but I am disposed to think that bearings taken from these high granitic or trappean peaks are not always to be depended upon, the needle being disturbed by local attraction.

Monday, September 19.—Ever since my ride to Bala Hissar I had been in treaty with my Armenian friend for the purchase of a parcel of coins, amongst which were a large imperial coin of Pessinus, one of Amorium, and one of Juliopolis, all in a beautiful state of preservation. This morning before starting we came to an understanding, but when he gave up the coins after he had received his money, I found on examining my purchase that he had contrived to abstract the three pieces above mentioned, and to substitute three Byzantine coins of no value whatever. On being reproached with his dishonesty he stoutly denied having made any change, but at length pulled them one by one out of his pocket and purse, observing very quietly that they must have slipped out of the paper.

I left Sevri Hissar at a quarter before nine, and after descending from the town continued for several miles along a narrow, well-cultivated valley, with hills rising gently on both sides, and gradually widening towards the south. At the fifth mile, leaving the valley on the left, the road, still in the same S.W. direction, led us over low undulating hills of white cretaceous limestone, amongst which were several beds of selenite, large fragments of which scattered about on all sides glittered in the sunbeams in a most dazzling manner. I immediately recognised the diamonds with which a friend who had once travelled this road by moonlight had stated the ground to be covered. Continuing our route for upwards of eight miles in the same direction

over these hills of limestone, some of the beds of which contained much white flint, we commenced at the fourteenth mile a descent by a narrow valley, which brought us to the flat and arid-looking plain of the Sakaria or Sangarius, and at a quarter after one reached the Tchiflik of Tchander, sixteen miles from Sevri Hissar. This miserable-looking spot, situated on the north bank of the deep and winding river, is yet a considerable mart, and a halting-place for caravans.

The river, which appeared to contain quite as much water as when I crossed it before, must I think be the main branch of the Sangarius. It was perfectly clear, and flowed with great rapidity, particularly through the bridge; and, though very winding, its general direction through the plain is from W.N.W. to E.S.E. We crossed it by an old stone bridge, in the construction of which many fragments of ancient monuments and other buildings have been employed, derived from the neighbouring ruins. Two of these bore inscriptions, but too much injured to be deciphered; on another was a pretty bas-relief, representing a female sitting on a chair. It is remarkable that Pococke, who was at the neighbouring village of Alekiam on his way to Sevri Hissar, says nothing about this river.

Soon after leaving Tchander and crossing the Sangarius we changed our direction to W. by S., and, keeping along the southern edge of the plain at the foot of the low chalk hills for four miles, reached the tents of the Turcoman village of Alekiam, in the midst of which mine was also pitched. Their tents were all well shaped, being formed of strong wicker-work, covered over with carpets and felt or numúd, generally of a dirty greyish-white colour; they were pitched in several divisions, from ten to twenty in each: the Turcomans remain here all the summer, their village or winter residence being about three miles off to the N.W. The burial-ground of Alekiam was close to us, and was full of broken columns, and other ancient remains, on several of which were

inscriptions.* On one pedestal I found the single word ΟΡΚΙΣΤΗΝΟΙ; another had a long inscription in honour of the Emperor Hadrian, erected by the Orcisteni, whose name was again in Greek. In answer to my inquiries where they came from, I was directed to a small Turkish Tekiyeh, not half a mile off S. by E., where I unexpectedly found myself in the midst of the ruins of an ancient city, which must have been Orcistus, three or four miles to the S.E. of the modern village of Alekiam.

The ground was literally covered with ruins: fragments of columns, tombstones, pedestals, and blocks of marble lay scattered in all directions; and I distinctly traced the foundations and part of the walls of three, if not more, large buildings, probably temples or churches, composed of blocks of marble and limestone; but, as if to economise the materials, the blocks were generally placed edgewise with the rough side inwards; some parts of the town had been cleared and ploughed over. About a mile to the west of the ruins is a mill, in the new dam of which a large pedestal has been used as a corner-stone, with a long Latin inscription on three sides. It is placed upside down, and under the falling water, so that I found it difficult even to attempt to copy it. I tried it again the next day, but could only make out enough to satisfy me that it was the same as that of which part had been already copied by Pococke.†

Returning to my tent at sunset I was much struck with the picturesque and patriarchal character of everything connected with the encampment, as well as the scenes of primitive domestic life which were going on. The herds of buffaloes and cows, and flocks of sheep and goats, were returning on all sides from their pastures on the neighbouring hills, or in the marshes near the river; horses ready saddled and bridled were picketed near the tents; fires were being lighted in front of every dwelling to prepare the evening meal; fuel, as in former days, is a scarce commodity

* See Appendix Nos. 150—154.

† See Appendix, No. 154. Pococke, Inscr., p. 9, No. 5.

in this axylous country, and, as in the days of Pliny, dried cow-dung, sometimes mixed with clay and made into cakes, is generally used as a substitute for wood; whilst all around a peculiarly animating concert was kept up, as if to stimulate or announce an appetite, by the universal barking of dogs, the lowing of herds, the neighing of horses, squalling of children, and screaming of women in every variety of tone.

Tuesday, September 20.—I found it extremely cold last night in my tent, and was obliged to wrap my blanket well round me, but was hardly prepared for the extraordinary change of temperature which was taking place, as the following observations will show. Yesterday at four P.M. the thermometer inside the tent was 82° Fahr.; at half-past eight P.M. it was 58°, and at ten P.M. 48°. This morning at six A.M. it stood at 35°; the sun, however, rose without a cloud or the slightest breath of wind, and the temperature rose rapidly, and at two P.M. it was again above 80° in my tent.

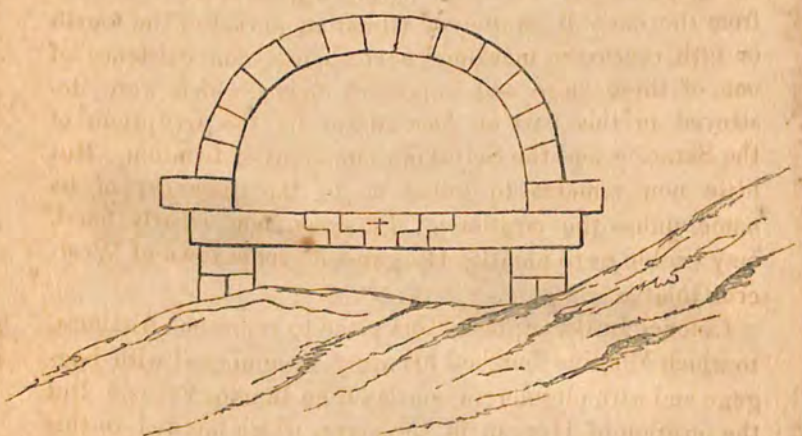
After an unsuccessful attempt to copy the Latin inscription, I left Alekiam at nine, having determined, instead of proceeding direct to Beiad, to go round by Hamza Hadji, to see the ruins of Hergan Kaléh, of which I had got some accounts at Sevri Hissar, and which did not appear to have been visited by former travellers. Leaving the village, we proceeded due south across the plain, and soon ascended the chalk hills, over whose barren and undulating surface we continued for nearly twelve miles S. by E. At eleven we had a very extensive view to the east, uninterrupted by a single hill; Emir Dagh bore due south, stretching away to the S.E., while to the W.S.W. a ridge of hills rose up in the middle of the plain, connected by a lower ridge with the mountains of Phrygia to the west. From what I could see, these almost insulated hills consisted of gravel and detritus, and probably owed their formation to the materials carried down from the mountains of Phrygia into this great lacustrine basin by some then existing river, and deposited

near its embouchure. At half-past eleven I passed a large stone sarcophagus, apparently lately dug out of the ground hard by; it was used as a trough at a spring which was now dry, nor did a stream or drop of water occur on the whole march. A short distance farther we passed an extensive burial-ground on the left, containing many large blocks of marble, and columns both prostrate and erect. As we approached the valley of Hamza Hadji, the chalk was overlaid with detritus of sand and gravel, derived from the neighbouring mountains to the south. At half-past twelve we descended into the valley, and turning to the S.E. soon reached the tents pitched near the centre of the plain; those of another village, called Purnek, were pitched close by, and the whole, consisting of several hundred, formed a striking scene.

After smoking a pipe and taking coffee with the Bey, or head of the tribe, I started with his horses, and under his guidance, to see the ruins of Hergan Kaléh, as they are called by the Turcomans, but Assar Kieui by the Turks, about three miles off, S.S.E. I could not help admiring the head-dress of some of the Turcoman girls whom we passed; it was a kind of helmet or casque of silver coins which hung down on each side of the face from under a turban or handkerchief, bound round the head. All the coins appeared to be Turkish, of the size of a crown-piece, but much thinner. At the end of the first mile we reached the village of Hamza Hadji, the winter quarters of the tribe, and then, proceeding over the hills, on which the peasants were threshing out their corn, we reached the deserted and dreary site of what was once a populous city; and seldom have I witnessed a more striking scene of solitude and desolation: a few cattle were grazing amongst the ruins, and a rank herbage and numerous wild flowers grew in profusion amidst the fallen buildings. Near the centre of the valley in which the ruins are situated, and at the junction of two smaller valleys, is an insulated hill about half a mile in circumference, on which

may still be traced a portion of the walls of an Acropolis. They appear to have been built of rough stones and cased with large blocks of marble, some of which are still *in situ*. Traces also remain of towers, by which the wall was strengthened; within all was ruin and confusion, though lines of streets and houses were still visible. On the northern slope of the Acropolis stood a solitary arch, probably of a church, built of stone, with its piers deeply buried in the *débris*, which have fallen down the steep side of the hill; beneath the arch, which appears to have been employed for the sake of greater strength, is a straight architrave, which formed the top of the entrance, and in which I was struck with the peculiar formation or dovetailing of the key-stone, on which also a small cross was sculptured as in the following woodcut:—

No. 13.



[*Arch at Hergan Kaléh.*]

The principal part of the town is to the S. and S.W. of the Acropolis, where a vast heap of broken fragments of cornices, architraves, columns, and dentils, chiefly of marble, seems to mark the site of a ruined temple; while farther to the S.S.E. are the ruined walls of a large oblong building, perhaps a gymnasium, and about a quarter of a mile from the Acropolis to the S.S.W. the remains of two more build-

ings, probably churches—of one of which several arches are still standing, and of the other only the piers. The walls of both appear to have consisted of rubble cased over with blocks of stone. Farther to the west of the Acropolis is a small valley with steep rocky sides, partly quarried. On its western side are several caverns or sepulchral chambers, cut in the solid rock; one of them which I entered was of an oblong form, and different from any I had yet seen, consisting of a single narrow niche about three feet wide, extending about eight feet into the rock, thus affording room for only one body.

In the Turcoman burial-ground, near the ruins, I searched a long time for inscriptions, but found only one, in Latin,* and that much mutilated. On the whole, it will be seen that these ruins, however extensive, cannot boast of anything peculiarly Hellenic. They appear chiefly to date from the early Byzantine or Christian period of the fourth or fifth centuries, marking, nevertheless, the existence of one of those large and important towns which were destroyed in this part of Asia Minor by the irruptions of the Saracens and the Seljukian monarchs of Iconium. But little now remains to guide us to the discovery of its name, unless the position of Pessinus, now clearly fixed, may enable us to identify Hergan with some town of Western Galatia.

Colonel Leake supposes this place to represent Anabura, to which Manlius marched his army, encumbered with baggage and with plunder, in one day from Beudos Vetus.† But the position of Hergan in the maps, which has led to this opinion, is ill laid down, for it really lies to the S.S.E. of Alekiam, instead of the S.W.; and consequently at too great a distance from Beiad for the Roman army to have reached it in one day. I was disposed, judging from the extent of its ruins and the evident traces of its former importance, to look upon it as the site of Amorium, a town of considerable importance, generally assigned to Galatia, although by

* See Appendix, No. 155.

† Livius, lib. xxxviii., c. 15.

Strabo described as a town of Phrygia. It was destroyed by the Caliph Motassem in A.D. 838, after a vigorous siege, in which the loss of human life on both sides is reported by the historians of the time to have been immense. The conquered Greeks fled to Dorylæum, which they reached in three days.* On comparing its position in regard to Pessinus, with the account of the Roman roads from Pessinus to Laodicea Catacecaumene, and from Amorium to Petra, given in the Peutinger Table, and also considering the account given by Anna Comnena of the campaign of her father Alexius between Dorylæum and Iconium, I have been still further confirmed in this opinion.†

In the Peutinger Table the following route is given from Pessinus to Laodicea:—

Pessinus to Abrostola - -	24 M. P.
Abrostola to Amorium - -	23
Amorium to Laodicea - -	20
	67

Another road branches off from Abrostola through the axylous country of Southern Galatia, and, passing to the south of the great salt lake, falls into the road from Ancyra to Tyana. The distance on my map from Bala Hissar to Hergan Kaléh is 23 G. M. in a straight line, but on comparing the above route with the map I find that there must be a great omission in the Table, as the direct distance from Pessinus to Laodicea is above 100 G. M., instead of 77 M. P. But there is another remarkable feature in the route given by the Table, viz. that in going from Amorium to Petra or Tyana the road returns to Abrostola, which must consequently have been to the east of Amorium. If then we place Abrostola south of Pessinus 23 M. P., or less than 18 G. M.,

* Gibbon, 'Decline and Fall,' chap. 52.

† In a short memoir published in the Journal of the Royal Geogr. Society, vol. vii. p. 57, I stated my opinion to be that Hergan Kaléh stood upon the site of Abrostola, but I was not then aware how the construction of the map would come out, nor had I consulted any authorities.

it will fall due east of Hergan Kaléh, and consequently on the road from that place to Sultan Khana and Akserai. Petra has been identified with Sultan Khana by Mr. Ainsworth;* let us therefore compare the Roman road from Amorium to Petra with the route given to me by the Bey of Hamza Hadji from thence to Sultan Khana and Akserai:—

Hamza Hadji to Dourghout - -	14 hours.
Dourghout to Atlan - - -	8
Atlan to Souwarech - - -	12
(Here are ruins of a castle)	
Souwarech to Orbúkli - - -	6
Orbúkli to Sultan Khana - -	6
	46

The Peutinger Table gives the following distances:—

Amurio-Abrostola - - - -	23 M.P.†
Tolosocorio - - - - -	24
Bagrum - - - - -	7
Vetisso - - - - -	20
Egdaua - - - - -	20
Pegella - - - - -	20
Congusso - - - - -	20
Petra - - - - -	15
	149

If the hours given me by the Turk are correct, and if they are reckoned at $2\frac{1}{2}$ G. M., we have 115 G. M. to 149 M. P., which is nearly the true proportion between the mille passuum and the geographical mile. The fact, however, is, that the number of hours commonly announced in Turkey is always overrated, for the purpose of increasing the remuneration for horses; and in this case I have

* Journ. of Royal Geogr. Soc., vol. x. p. 297.

† Two distances are given in the Table between Amorium and Abrostola, viz. 11 and 23 miles; the first, however, is 23, and therefore I have preserved it.

little doubt that 2 G. M. to the hour would be a fair computation.

Thus, as far as the Tables are concerned, the ruins of Hergan Kaléh will agree with the site of Amorium, both with regard to Pessinus as well as to Petra; but it may be interesting to introduce a short sketch of the campaign of Alexius, A.D. 1110, as described by his daughter Anna.* Coming from Nicæa, and after passing through Armeno-Castrum and Leucæ, he entered the plain of Dorylæum, where he reviewed his army. From thence he marched to Santabaris; where he divided his troops, and directed one division, under the orders of Camytzes, to march against Polybotum and Cedrea, and another, under the command of Stypéotes, to attack the garrison of Amerion (Amorium), which had fallen into the hands of the Saracens.

Cedrea appears to have been on the way to Polybotum, and Stypéotes conquered the barbarians at Pœmanenus, on his way to Amorium. The Emperor reached Cedrea in the evening, and hesitated whether to proceed to Iconium direct, or to attack the Turks, who were approaching from Philomelium: he determined upon the latter.

In the mean time the Turks, who were hastening to pass the bridge of Zompi in order to join the Sultan Monolycus, were met by Bardas, one of the Imperial generals, and conquered by him, in the plain of Omorion (Amorium). This bridge of Zompi must have been over the Sangarius, as the whole transaction took place to the left of the Emperor's army. After sending assistance to Bardas, Alexius marched towards Philomelium, halted at Mesonacte, near the lake of the Forty Martyrs, and then took Philomelium† by assault.

Having sent his troops to ravage the country about Iconium, the Emperor returned by the same road, and the Turks showed no intention of attacking him, until he reached the plain between Polybotum and the lake before mentioned.

* Anna Comnena; French Translation, liv. xiv.

† I shall hereafter show that Philomelium was at Aksheher.

After the battle, keeping along the foot of the mountains, the Emperor marched towards Amprus. At length peace was signed in the plain between Augustopolis and Aoronium. I shall again have occasion to recur to the geography of this part of the country; but for the present I think we may rest assured that the sites of Pessinus and Amorium are satisfactorily fixed, the former at Bala Hissar, and the latter at Hergan Kaléh.

CHAPTER XXVI.

Leave Hamza Hadji—Geumek Kieui—Beiad—Mountain Chain—Kirk Hinn—Eski Kara Hissar—Quarries of Synnadic Marble—Plantations of Madder—Afiom Kara Hissar—Remarkable Acropolis—Considerations on the March of Manlius.

WEDNESDAY, September 21.—A violent altercation took place last night between Hafiz Agha and the Imaum of the village, who chose to upbraid the Tatar with his conduct in travelling with an infidel and a spy. The Tatar retorted, and threatened to complain of him to the Mutzellim of Afiom Kara Hissar.

At half-past eight we started, and, ascending the broad grassy plain to the west, soon passed the encampment of the village of Purnek, near which in a burial-ground were many marble columns, and other fragments derived from ancient edifices. At half-past ten we passed through the village of El Khan, immediately beyond which a road leads S.S.W. to Bolawadun, already recognised by Colonel Leake as the ancient Polybotum. Fragments of ancient monuments, and sites of deserted towns and villages, were frequent along this fertile valley, which, widening as we advanced, was bounded on either side by low undulating hills. At El Khan the insulated ridge of hills already described bore N. by W. about five miles off. At half-past eleven we came to a Turkish fountain plentifully supplied with water, where I copied the inscription No. 156, and thence crossing the dry bed of the river flowing down the valley to the east, I visited the burial-ground of a small village called Geumek Kieui, a quarter of a mile to the north of our road, and eleven miles westof Hamza Hadji. Here were many columns of Synnadic marble, and other ancient monuments, but I saw no inscriptions.

On the hill immediately above the burial-ground was a small ruined building, the stone facing of which, as well as an arch which formed a vaulted floor within, had been removed to form gravestones for the Turcomans.

At Geumek Kieui our direction changed to W.S.W., and after crossing the plain for two miles and a half we reached the opening of a beautiful and well-wooded valley, near which on the right of the road were the ruins of a square building, church or castle, of Byzantine architecture. Surrounded by ruined walls and foundations, and heaps of stones collected together, it now consists of one large apartment arched over with bricks; the floor of the principal room, which is of considerable height, being also formed of brick arches, with a kind of crypt or dungeon beneath. The whole is constructed of alternate layers of bricks and stone. Many fragments of sculptured marble are built into it, and in the foundation within the crypt are many well-preserved Greek sepulchral monuments with inscriptions.* If Beiad represents Beudos Vetus, these ruins may mark the site of Anabura, the distance from Beiad being seven miles, for, in the account which Livy gives of the march of Manlius, he says that on the preceding day he had only marched five miles; but I do not think the topography of the country will quite bear out this hypothesis.

Leaving the ruins we entered the valley, the sides of which were covered with oak-coppice and a species of dwarf spreading cypress, most refreshing to the eyes after the dreariness of the Haïmaneh and the axylous country in which we had been travelling since leaving Angora. We continued winding up the valley, crossing and recrossing the stream several times, the hills consisting of semi-crystalline limestone. About a mile and a half before reaching Beiad, leaving the stream on our right, we crossed a low ridge of hills, consisting of a soft white tufaceous rock, apparently volcanic sand, interstratified with thick beds

* See Appendix, Nos. 158—160.

of tabular flint, which frequently assumed the appearance of quartz resinite, and, from its more durable character, and resistance to weathering, overhangs the other beds in the form of a projecting ledge.* At half-past three we reached Beiad, in a small plain surrounded by lofty hills, particularly to the west and south; there are no remains to mark its being on the site of any ancient place, but it is on the high road from Dorylæum to Iconium, and is still a great thoroughfare for caravans. To the west of the town are two large ruined khans, built three hundred years ago by Sultan Selim; but, although this has long been the great pilgrim route from Constantinople to Damascus, they have latterly been suffered to fall into decay. The highest peaks of Emir Dagh bore from the town nearly S.E.; the wild sheep are not found there, but in the great plain to the north of Konieh; bears are said to abound in the neighbouring mountains.

Thursday, September 22.—Ther., 6 A.M., 51°. The distances from hence are—to Bolawadun seven hours, to Kozru Pacha Khana five hours, to Hamza Hadji six hours, and to Eski Kara Hissar five hours. We started from Beiad soon after seven, ascending a narrow undulating valley, the waters of which flow N.N.E. into the great plain of Phrygia and Galatia, and thence into the Sangarius; this stream was probably the ancient Alander. Leaving the valley, the road led through a narrow defile in the schistose rocks, covered in several places with an efflorescence of a yellow bitter salt, probably alum. As we advanced, the hills became steeper and more wooded, and we ascended by a winding path over a white pumiceous rock of volcanic origin, until we reached the summit of the ridge soon after nine. This consisted of the same formation, but the road and hill-sides were strewed with pebbles of quartz, schist, and basalt.

Descending by a steep and picturesque road, I observed

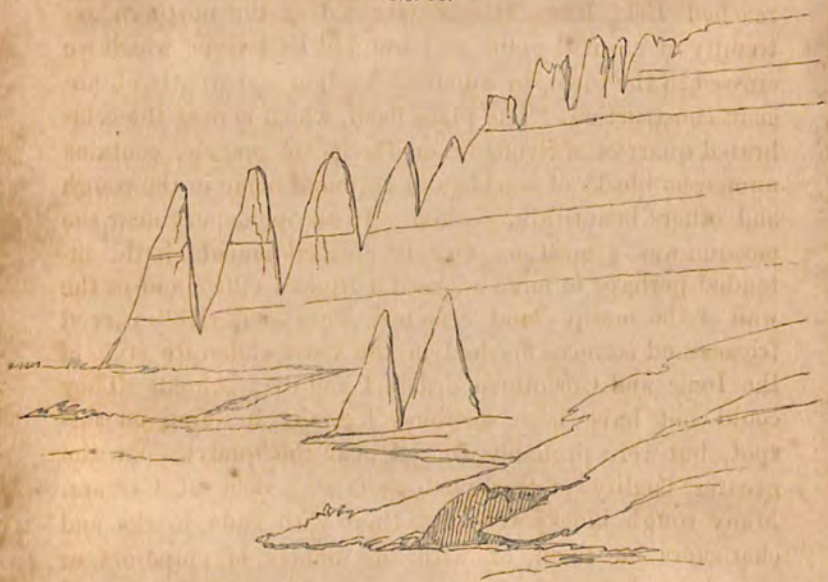
* Mr. Fellowes has described this formation as extending considerably to the N.W. of this locality.

that the high hills on the right were capped with a red compact phonolitic trap or trachyte slightly columnar, fragments of which strewed the road. The wooded hills sloped to a deep valley on the left, beyond which rose another range of hills equally covered with forests. The appearance of the rocky heights on our right and before us was very striking. The white pumiceous rock, dipping slightly towards the west, was here and there interstratified with beds of tabular flint, which stood out in bold projecting ledges, and gave them a peculiar character. At ten we crossed another ridge, and entered a parallel valley, where we came in sight of a remarkable insulated mass of the same white rock, called Kirk Hinn (forty caves). Its sides are perfectly perpendicular, and contain a great number of excavated chambers, some single, some communicating with each other, the whole presenting a very singular appearance. Several of the upper excavations, from which the outer surface of the rock seems to have fallen away, were quite inaccessible, and the interiors of the chambers were exposed; even the rude stairs for reaching them, which were probably similar to those by which I was enabled to visit the lower ones, had given way. Many of the caves which I entered consisted of several apartments communicating with each other, but I saw no niches for placing bodies. I was at first disposed to consider them as the Necropolis of a neighbouring town, and as having some connexion with the interesting monuments discovered by Colonel Leake in the same mountains near Doganlu, to the north, and which are excavated, I am told, in the same rock; but from the many similar objects which I have since observed in Cappadocia, and which are far too numerous to have been tombs, I think they must have been the habitations of some troglodytic race in the first ages of the occupation of Asia Minor; and they may thus mark the site of an ancient town. Similar chambers have also been excavated in the rocks which bound the adjacent valleys.

About a mile beyond Kirk Hinn I was struck with the remarkable forms into which this friable pumiceous

rock had been converted by the long-continued action of the elements and weathering. A group of lofty pointed cones and pinnacles extended from the base of the hills, both to the left of the road and in front of us. Some of them nearest the plain were fifty feet high; others near the summit of the cliff were only in the first infancy of formation. The upper stratum did not appear to weather in the same degree or manner, but into deep square fissures: the following woodcut will give some idea of the termination of some of the hills.

No. 14.



[*Conical Hills near Kirk Hinn.*]

More caverns were visible near the village of Seideler, about a mile to the south. Soon after passing these conical hills and leaving the valley on the left, we mounted to a barren and extensive table-land, consisting of brown and greyish trachyte: in the road, where the bare rock itself was well exposed and cleared from the soil and pebbles which obscured the rest, the concentric structure, which the rock had evidently assumed in cooling, was extremely well deve-

loped. The concentric masses were often ten or twelve feet in diameter, each separate layer or lamina being about an inch in thickness; the circles which surrounded each nucleus were generally extended, until they came in contact with each other; and lying by the road-side were also many globular masses, which had been the nuclei of similar systems of concentric rings. The character of the rock was in places scoriaceous and vesicular.

From this hill we descended by a steep and rocky road resembling a bad staircase, and at half-past twelve we reached Eski Kara Hissar, situated at the northern extremity of a small plain, and watered by a river which we crossed in the town, by a marble bridge, apparently of ancient construction. The place itself, which is near the celebrated quarries of Synnadic or Docimitic marble, contains numerous blocks of marble and columns, some in the rough and others beautifully worked. In an open space near the mosque was a most exquisitely finished marble bath, intended perhaps to have adorned a Roman villa; and in the wall of the mosque and cemetery were some richly carved friezes and cornices finished in the most elaborate style of the Ionic and Corinthian orders I had ever beheld. They could not have been destined for any building on this spot, but were probably worked near the quarries for the greater facility of transport, as is still done at Carrara. Many rough blocks were also there with rude marks and characters on them, or with the names of emperors or consuls, and sometimes a numeral. I also copied several inscriptions in different parts of the village, which were generally in good preservation.*

In the afternoon, having procured a guide, I proceeded to visit the quarries, about two miles and a half to the S.E., on the east side of the plain, which extends to the south. Before reaching them their existence was pointed out by a hundred little mounds or monticules of chippings from the extracted blocks, as well as surrounding the entrance

* See Appendix, Nos. 161—164.

to the principal open quarry. This has been worked horizontally into the hill, the sides of which are cut away perpendicularly to a very great height, for those splendid columns which were to gratify the pride of the rulers of the world. The marble is highly crystalline, and occurs of the following varieties of colour—white; blueish white; white with yellow veins; white with blue veins; and white with blue spots, having almost a brecciated appearance.* All traces of stratification are obliterated, but in a few cavities are some fine specimens of concentric crystalline calcareous spar. Exploring the hills beyond I found several more quarries to the E. and S.E., but all worked downwards from the top, not from the side of the hill like the one to which my guide had led me. As far as I could ascertain, this mass of marble is entirely surrounded by trachytic hills, to which it owes its crystalline and altered character, being to all appearance a portion of the older secondary limestone caught up, and enveloped by the protruded volcanic rocks, and crystallized by igneous action.

Friday, September 23.—Eski Kara Hissar to Afiom Kara Hissar four hours. We started soon after seven, passing over the low hills to the west of the plain; here we saw several fields of poppy (Afiom), much cultivated in the neighbourhood, and from which the town of Afiom Kara Hissar has derived its name. Our general direction was S.W. by W. In addition to the trachytic hills of yesterday we saw several volcanic-looking cones bearing W. and W.N.W. from Eski Kara Hissar three or four miles, and a few miles farther the white tufaceous formation was covered with trachyte derived from the neighbouring hills. Between the fifth and sixth miles were traces of a road extending in a direct line over the hills as if leading from Eski to Afiom Kara Hissar. It could be traced for a long distance, and probably marks the line of the old Roman road. The lofty rock of Afiom Kara Hissar was very

* Compare these colours with the descriptions of the marble quoted by Cramer, Asia Minor, vol. ii. p. 27.

conspicuous a-head of us, when descending from a low ridge the watershed of two distinct plains we entered a narrow valley; between the sixth and seventh miles, after passing through a narrow opening between two lofty rocks of a metamorphic character, we entered the large and level plain of Afiom Kara Hissar.

A ride of nearly five miles in a S.S.W. direction completed our day's journey. I was at first much struck with the neglected appearance of the plain; there being but little cultivation, and the only thing which arrested my attention being the bold rock which rises up in the centre of the town, and on whose almost inaccessible summit are the ruins of a fort either Byzantine or Turkish. As we advanced however cultivation improved; besides a few poppy-fields, corn was occasionally seen; and when more than half way across, we passed many fields prepared and sown for kizil boya, or red-dye (madder); the ground is raised in broad ridges like asparagus-beds to protect the young plants, and the small enclosures had an appearance of neatness and careful cultivation. Large quantities of it are sent to Smyrna, whence it is exported for the European markets. A mile and a half before reaching Afiom Kara Hissar, we crossed by a modern stone bridge a winding river by which the plain is watered, and which was said to be full of fish. Besides the Castle hill or Acropolis, several smaller detached hills of red trachyte rise up to the north, extending round it in an apparently semicircular line.

Soon after eleven we reached the town, which had a gay and busy look, from the bustle which was going on. Many parties of the Nizam troops crowded the streets, and everything told us we had at length reached the high road from Constantinople and Smyrna to Syria. The number of troops was said to be 2000, the population consisting of 8000 Turkish and 400 Armenian families. A long ride through the bazaars and crowded streets brought us to our konak in a clean Armenian house.

Saturday, September 24.—I halted here this day, and

ascended to the summit of the Castle rock, by a steep and difficult path leading up the narrow crevice of its almost perpendicular sides, which were well defended by walls and numerous towers. The rock itself consists of red trachyte, containing large crystals of glassy felspar. On the almost pointed summit were the ruins of a castle with battlements and embrasures, but nothing to denote the existence of an ancient Acropolis. Near the lower entrance however was a colossal headless statue lying on the ground, with much drapery, and apparently female, and a little higher up the mutilated figure of a lion. The view from the summit was most extensive; the two large and three smaller trachytic hills to the north of the town, running in an irregular line from S.W. to N.E., appeared to be the continuation of a ridge of hills to the west extending in the same direction, and also trachytic.

I afterwards spent some time in the different burial-grounds in search of inscriptions, but, although there were several, besides fragments of architectural sculpture, cornices, columns, &c., and another statue in the Armenian burial-ground, I could find none which gave the least information as to the name of any ancient city in the neighbourhood. The inscriptions were chiefly sepulchral,* and the tombstones much in the same style as those which I had seen at Pessinus and other places in that district.

The troops which were now quartered in the town belonged to the Rediff, a kind of national guard lately established throughout Asia Minor, and said to consist of nearly 200,000 men: they only serve in their own provinces, and during a limited period of the year; a fourth of the whole number being generally called out every three months. Some large barracks were now being built for them outside the town. I have omitted to mention that, when on the summit of the Castle rock, I found my compass completely put out by some strong local attraction, and I remarked that when I placed it on the rock its variation was several

* See Appendix, Nos. 165—169.

points* more to the west than when I held it in my hand. I had observed the same thing at Sevri Hissar, and can only suppose it to have been occasioned by a large proportion of iron in the volcanic rock.

Having thus described the present appearance of this place, I wish, before proceeding with my journey, to make a few remarks upon what may have been its ancient name, and on those places between it and Galatia which occur in the campaign of Manlius as described by Livy.† The following is an outline of the march of the Roman army:—Leaving the country of the Sagalassenes, they marched to the sources of the Obrimas, and pitched their camp at a village called Acaridos Come. Seleucus came there the next day from Apamea; after which the consul, having sent away the sick and the baggage to Apamea, taking some of Seleucus's men as his guides, marched on the same day to the Campus Metropolitanus, and on the next day to Diniæ of Phrygia. From thence he came to Synnada (it is not said in how many days). From Synnada the army was so encumbered with booty that they only marched five miles in the whole day to Beudos Vetus; another day's march brought them to Anabura, the next day to the sources of the Alander, and on the third (the fourth from Synnada) they encamped at Abbassus. Here they reached the frontiers of the Tolistoboii.

Let us now endeavour to apply this description to the actual geography of the country. From Sagalassus the consul marched by the northern end of the lake of Buldur; from thence he might have crossed the mountains into the great plain of Phrygia Paroreius by two routes, one to the west, the other to the east of Afiom Kara Hissar; but, as he passed by the source of the Obrimas,‡ one of the feeders of the Mæander, it is clear that he took the western road;

* I find *points* written in my journal; I should have thought *degrees* more probable, but am disposed rather to trust to what was written at the time.

† Lib. xxxviii. c. 15.

‡ The real Obrimas of the ancients is not yet clearly ascertained.

he must therefore have passed up the Dombai Ova, situated at the back of the hills of Apamea Cibotus; and the meeting between Seleucus and the consul probably took place in the valley or plain of Dombai. Now, some very remarkable springs rise here about eight or ten miles from Apamea, and form a considerable river, which after flowing across the plain loses itself in a marsh at the foot of the hills behind Apamea. Manlius must then have marched through the plain of Sandukli, into another more to the north, where are the sources of a small river, which, although almost dry in summer, falls into the Mæander below Ishekli or Eumenia. One of these rivers must be the Obrimas—probably the latter; in either case the Campus Metropolitanus will be the plain of Sitshanli to the west of Afiom Kara Hissar.

Livy does not state the distance from Metropolis to Synnada; but we know from other sources* that both these towns were on the high road from the western parts of the continent to Cappadocia and Lycaonia. Synnada was also a place of great importance, being the capital of a Conventus Juridicus, and, for the sake of its commerce, must have been situated somewhere in the great plain of Afiom Kara Hissar. Indeed the striking position of this town at one time induced me to consider it as the most likely site of Synnada; but, on considering the detail with which Livy has described the consul's march from thence into Galatia, I am inclined to think it must have been farther to the east. The pass by which I crossed the mountains from Beiad to Eski Kara Hissar is the only road from the plains of Galatia into Phrygia to the west of Emir Dagh, except that which leads direct to Polybotum, and we may therefore conclude that the Romans marched through it; and as they were making their way through a mountainous country, we shall be less surprised at the short marches of only five or six miles per day. On examining the route

* Cicero, Epist. ad Att., v. 20. Pliny, N. H., lib. v. c. 29. Strabo, xiv. p. 663.

from Synnada to Abbassus, the only point which we can fix with certainty from the geographical features of the country is the "Fontes Alandri," a river flowing through the plain of Galatia; and this must be the stream which waters the valley of Beiad about four or five miles above that place. Working back then from thence, and allowing an average march of five or six miles to the army, encumbered with baggage and crossing a mountain-chain, we should place Anabura at Kirk Hinn, and Beudos Vetus at Eski Kara Hissar; and it is not a slight confirmation of this opinion to find in the Latin and Turkish names the two corresponding appellations "Eski" and "Vetus." Eski Kara Hissar is situated about five or six miles due north of the great plain of Phrygia Paroreius, throughout which are considerable remains of ancient monuments, and inscriptions; such indeed are to be found in all the villages and burial-grounds near the spot where the river of Eski Kara Hissar enters the plain.*

These, I have little doubt, mark the site of Synnada, as I shall hereafter endeavour to show. There is no reason why we should look for the ruins of Synnada in the mountains, merely because the quarries were there, for Strabo expressly says the marble was called Synnadic by the Romans, from the name of the principal town, but that it was called Docimitic by the natives, from Docimia, the name of the place where it was found. The great plain of Phrygia is here about seven or eight miles wide, which would also agree with the ἑξηκοντα σταδιοι of Strabo.†

If we now follow the march of Manlius from the "Alandri Fontes" to Abbassus, we find him descending the valley and marching with greater rapidity. It is evident however from the following part of the narrative that he did not continue down the valley of the Alander, but must have kept it on his left, following that which I ascended from Geumek Kieui; where, on reaching the plain, he would find himself in the country of the Galatians. "Perventum

* See vol. ii. post.

† Lib. xii. c. 8.

erat ad Tolistoboiorum fines." Abbassus then must have been at the mouth of this valley, and we may therefore place it at the ruins six miles below Beiad. The march of Manlius from Abbassus to Pessinus is thus described by Livy:*—Marching from Abbassus he reached on the first day the river Alander, and on the next the village of Tyscon. From thence he marched to Plitendus, and then to Alyatti. After that he entered the Axylous country, the description of which given by Livy most accurately corresponds with the dry, barren, woodless country to the east of the Phrygian mountains, and between the Sangarius and Emir Dagh. "Fimo bubulo pro lignis utuntur"—they use cow-dung for fuel instead of wood—and how often did I see the same thing done in that country! At Cuballum they were attacked by the enemy's cavalry; after which the consul, finding that he had entered the enemy's territories, marched with great caution—"explorato et cum cura coacto agmine"—until he reached the Sangarius, which Livy describes as flowing through Phrygia from Mount Adoreus.

It appears from this that Manlius, breaking up from Abbassus, reached the Alander. Now the Alander was on his left; he must therefore have marched north along the foot of the Phrygian hills, in which direction he continued for several days, keeping along the hills, and halting at Tyscon, Plitendus, and Alyatti, not having yet entered the Axylous district: this clearly proves that he had not entered the great Galatian plains, for it is impossible to mistake the description of this country.† The fortress of Cuballum, where he first fell in with the enemy after entering the Axylous plain, and had consequently begun marching to the east, may have been somewhere near or on the insulated hills, to the S.S.W. of Tchander; from whence, in the careful manner in which he is described

* Lib. xxxviii. c. 18.

† Duci inde exercitus per Axylon, quam vocant, terram cœptus. Ab re nomen habet: non ligni modo quicquam, sed ne spinas quidem, aut ullum aliud alimentum fert ignis. Fimo bubulo pro lignis utuntur.—Liv. lib. xxxviii. c. 18.

as having advanced, there would have been three or four days' march to that part of the Sangarius nearest to Pessinus, where he caused the bridge to be thrown across it. This would have been probably on the road from Pessinus to Abrostola, which appears to have been nearly due south from the capital of the Tolistoboii.

The question of the name of the ancient city which formerly occupied the remarkable site of Afiom Kara Hissar must be deferred for the present. I will only now observe that, in the present state of our information, it is difficult to decide between the relative claims of Diniæ, Metropolis, and Synnada, although I am rather disposed to give the preference to the former.

CHAPTER XXVII.

Leave Afiom Kara Hissar—Akkar—Cross Sultan Dagh—Yalobatch—Ruins of Antioch of Pisidia—Auschar—Lake of Egerdir—High hill—Yeniji Kieui—Hoïran Ghieul—Mountain-pass—Turkish Geography—Egerdir—Ruined Castle—Plains of Assar—Whirlwinds of Sand—Reach Isbarta—Hospitality of the Greeks—The Turkish Governor.

SUNDAY, September 25.—From Afiom Kara Hissar I proposed to cross the mountain range of Sultan Dagh, which forms the southern boundary of Phrygia Paroreius, and to visit the site of Antioch of Pisidia, the ruins of which had been ascertained by Mr. Arundel to be near the town of Yalobatch. We started at a quarter after eight, and keeping along the foot of the hills which rise to the south of the plain, met many peasants with carts and asses, bringing vegetables and other provisions from the neighbouring villages. The general direction of our road was E.S.E.; at the third mile we passed the site of a ruined town or village called Keunen Eureh Kieui, near which were many heaps of large stones and blocks of marble, and a burial-ground crowded with columns. A mile further I left the high road to visit the village of Seurlen Kieui, picturesquely situated at the foot of the hills, and surrounded by well-watered gardens, shady orchards, and groves of walnut-trees. Here, as I expected, were several inscriptions,* some of which are interesting, although none reveal the name of any ancient city. In the plain outside the village was a low insulated hill, round the base of which were numerous blocks of marble, evidently derived from an ancient building. The melon-grounds extended some way into the plain, and exhausted every drop of water which descended from the hills. From thence we con-

* See Appendix, Nos. 170—175.

tinued along the foot of the mountains four miles, until we reached the village of Kara Aslan (Black Lion), upon another insulated mound, beyond which we entered the low limestone hills constituting the most northern outlier of this mountain range, and over which our road led for six miles further.

At half-past two, about sixteen miles from Afiom Kara Hissar, we quitted the plain, and turning to the south ascended a wide valley, which we crossed in an oblique direction, passing through the site of a ruined town or village, marked by heaps of stones and the foundations of walls. The valley is watered by a small stream from a lake near its upper end; on the dry undulating hills on either side, the herbage of which was completely burnt up, were several small villages, at one of which, called Akkar, said to be half way to Yalobatch, or nine hours from Afiom Kara Hissar, we halted for the night.

Monday, September 26.—The marshy lake, four or five miles up the valley to the S.W., was a most unwelcome neighbour, for the whole atmosphere swarmed with gnats, bred among the numerous reeds which line the banks. After a sleepless night, the irritation of the bites all over my face and hands, increased by the heat of the sun, was so annoying that I could only obtain relief by cutting every bitten spot with a lancet, and letting out a drop of blood from each. When we left Akkar, at half-past seven, the morning was cold and raw, and heavy clouds hung on the tops of the surrounding hills. Large herds of cattle and camels were grazing in the plain and on the lower slopes of the hills, which appeared to afford excellent pasture. We proceeded S.S.E. for four miles along the foot of the hills on the west side of the valley, until we ascended the mountains, consisting of argillaceous shales and schist, and a thick-bedded semi-crystalline blue limestone; the path was steep and rocky. At ten, when we reached the summit of the ridge, a branch of Sultan Dagh, extending S.S.W. at right angles to the principal chain, we were enveloped in a dense mist, but soon began a rapid and

picturesque descent into the rich and undulating district of Yalobatch. Our direction was chiefly S.E., crossing a succession of ridges and intervening valleys watered by small streams flowing S. and S.S.W. into the lake of Hoïran. These ridges consist chiefly of limestone conglomerate and beds of yellow clay; the former containing pebbles derived from Sultan Dagh, and cemented together in a calcareous paste, while the latter is derived from the decomposing shales. At twelve the lake of Hoïran was visible through a gap in the hills S.W. by S., and camels and cattle were grazing in the plains; about five miles before reaching Yalobatch we passed the flourishing village of Segurler, embosomed in gardens and surrounded by orchards and villas. Here we changed our direction to S. by E., descending the valley, which widened considerably, and meeting many peasants returning from the bazaar at Yalobatch. The country seemed well cultivated, and the peasants in easy circumstances; I heard, however, afterwards several complaints respecting them. At length the ruins of Antioch appeared on the low hills to the left at the foot of the mountains, at a distance of a mile and a half, the ruined aqueduct forming a conspicuous object in the view; and we soon reached the straggling town of Yalobatch. This is a small cassaba of 500 or 600 houses, belonging to the government of Isbarta, watered by a small stream, which trickles through the streets from the east, and falls into the lake of Egerdir. The distance from Yalobatch to Aksheher is six hours over the mountains, Aksheher being exactly opposite. This agrees with Strabo's account of the relative positions of Antioch of Pisidia and Philomelium, and leaves little doubt that the latter town has been correctly placed at Aksheher.

Tuesday, September 27.—I started early this morning to see the ruins, which are about a mile and a half from Yalobatch; they have been already so fully described by Mr. Arundel,* who in one of his excursions from Smyrna reached this place, that I shall be very brief in my notice of

* Discoveries in Asia Minor, vol. i. p. 269.

them. The site of the town is covered with huge blocks of marble, and the first ruin which I saw was an oblong building consisting of an inner and an outer wall, extending from S.E. to N.W. The outer wall is built of rough blocks of blue semi-crystalline limestone four feet in thickness, and is formed of two rows of large stones placed edgeways. The inner wall, which is also a parallelogram, is built of white scaglia limestone. The length, including the thickness of the inner wall, is 73 paces, or about 180 feet, and its breadth 24 paces or 60 feet. It has been a temple or a church, perhaps each in succession. About 200 yards to the N.E. are the remains of another massive building on the brow of the hill facing N.W.; beneath are two arched vaults, one of them leading into several subterranean chambers; above these is a flat terrace, with the foundations of other massive walls beyond. One of the most striking features is the ruined aqueduct, considerable remains of which are still standing; it conveyed water from the foot of Sultan Dagh along the crest of a hill to the north of the town, from which it is now separated by a ravine over which it was formerly carried. Here traces of it may be seen extending along the sides of the valley, with the remains of a high tower on the city side, probably belonging to a reservoir from whence the water was distributed over the town. To the north it follows the windings and sinuosities of the hill, which rises gradually, so that the piers of the aqueduct diminish in height, until at the distance of half a mile they are quite lost, and the water must have been conveyed along subterranean channels. There is great irregularity in its construction, part being roughly built as if repaired at a later period; the piers themselves vary in thickness from six to nine feet, and the span of the arches from twelve to fifteen feet.*

Returning from the aqueduct to the corner of the wall, which appears to have been connected with it, I observed a

* A good view of this aqueduct is given in Laborde's work on Syria and Asia Minor.

low narrow pavement extending from it S.E. by S. into the interior of the town. From thence the ground rises to the S.E. to the top of the hill a quarter of a mile distant, which was probably the Acropolis, and then falls rapidly to a deep ravine on the east. Near the summit a curious semicircular hollow has been excavated in the rocky side of the hill to the N.W., in the centre of which a large mass of solid rock twenty feet square, and hollowed out into a square chamber, has been left standing. Masses of highly finished marble cornices, with several broken fluted columns two feet eight inches in diameter, are scattered about the hollow, and on the perpendicular face of the rock a row of small square holes has been cut all round, about ten feet from the ground, as if for the insertion of beams. It has probably been the adytum of a temple, for the remains of a portico are to be seen in front, with broken columns, cornices, and other fragments. Antioch was celebrated in its early days for the worship of Men Arcæus, and it is not unlikely that this building may have been connected with the worship of that deity, perhaps the Menes of the Lydians.

At the back of the Acropolis is a deep ravine, watered by the stream which flows through Yalobatch, probably the Anteus of antiquity, on the banks of which Antioch seems from its coins to have been situated. The remainder of the day was spent in copying inscriptions * in the modern town and suburbs, although on my arrival the existence of any was denied. They were all in Latin, with the exception of No. 177, on a sarcophagus. I was fortunate enough to find one with the words ANTIOCHEAE CAESARE; the remainder having been entirely effaced. In turning over a large column to copy an inscription we disturbed some curious red and black-spotted toads of the most disgusting ugliness. † Whilst walking about the town I fell in with the son of the governor, who was colonel of the rediff (a corps of 1400 men). He was reposing under the shade of a plane-tree by

* See Appendix, Nos. 176—188. † Q. Bufo calamita?

the side of the muddy stream; he wore a rich pelisse of gold embroidery, and whilst he was indulging in his amber-mouthed pipe we talked together for some time; he appeared intelligent and civil. The position of Yalobatch by meridian altitude is 38° 17′ 30″.

In conversation with my landlord this evening I heard much respecting the mode of taxation prevalent in Turkey, which, although apparently founded on justice and liberality, and theoretically wise and salutary, as it has been declared to be by the admirers of Turkish government, is in reality unjust, and productive of the most injurious consequences: but the Turks, who seldom reason or consider anything beyond the immediate consequences of a measure, will hardly be taught to view it in this light. When a tax is to be imposed, the Pacha or governor of each province (the whole amount having been already settled by superior authority) distributes it amongst those under his command, and directs what proportion shall be paid by each district, while the Agha of the district fixes that of each separate town or village. When this is decided, it is left to the elders and principal inhabitants of the place to apportion the sum amongst themselves and their fellow-citizens; of course the money must be paid immediately, and therefore it would be useless to charge any part of it on the poorer inhabitants, who either could not pay, or would thereby be reduced to beggary. The consequence is that the rich alone are taxed, each in proportion to his means, which are of course well known to his neighbours. This method ensures the payment of the contributions, and appears at first sight fair and reasonable. That the rich should pay more than the poor is only just and proper, but the same result is obtained more effectually, according to our European notions, by indirect taxation, each individual paying in proportion to his consumption, whereas the Turkish system operates as a direct premium upon idleness.

For the little that is known respecting the early history of

Antioch of Pisidia I must refer to Cramer's Asia Minor.* It derives its greatest interest from the visit of St. Paul and Barnabas, related in the 13th chapter of the Acts of the Apostles, and from the details of Paul's impressive preaching in the Jewish synagogue. It was here that these Apostles said to the ungrateful and blaspheming Jews, "It was necessary that the word of God should first have been spoken to you: but seeing ye put it from you, and judge yourselves unworthy of everlasting life, lo, we turn to the Gentiles." From Antioch of Pisidia, then, as from a second Jerusalem, we may date the first preaching of Christianity to the heathens, and cannot but look upon its deserted site and fallen ruins with a feeling of respect and veneration.

But the history of Christian Antioch is not confined to this early period. When the forces of the crusaders marched across the plains of Asia Minor on their way to Syria, under the command of Boemund and Tancred, A.D. 1097, the walls of Antioch received their armies, exhausted by the dried-up plains of Phrygia and Galatia, after the victory near Dorylæum,† and where the sufferings they endured from want of water were greater than what they had felt at the hands of the mailed warriors and countless cavalry of Soliman.

Wednesday, September 28.—At half-past eight we left Yalobatch, keeping to the north of the gardens of the town, down the fertile valley to the S.W., and along the banks of the river, increased by several small streams which enter it from the north. About six miles from Yalobatch, quitting the river as it flows through a deep and rocky ravine to the left, we ascended a range of limestone hills to an elevated plain, where we fell in with a busy scene, viz. the halt of a tribe of Euruques, who had just reached the ground destined for their encampment. Each family, with its herd of camels and mares, and flocks of sheep and goats, took up

* Cramer, Asia Minor, vol. ii. p. 301.

† Gibbon, Decline and Fall, c. 58.

a separate station; the women were busy unrolling their tent-cloths and driving in the wooden pegs, while the camels knelt down side by side waiting patiently to be relieved of their loads, and then strolled away to the neighbouring hills to graze on the dry grass and thorny shrubs; the men mounted on their horses were galloping about shouting aloud, and giving their orders in every direction with an air of great importance. Each string of five or six camels was almost always preceded by an ass.

The limestone rocks on the left, which were horizontally stratified, and generally soft and earthy, containing a few fossils apparently tertiary, with some harder beds resembling a compact scaglia, rose to a considerable height; beyond them was a deep ravine, with the river of Yalobatch, and beyond that again another range of mountains, rising almost perpendicularly to a much greater height. At half-past twelve, on reaching the summit of a low ridge, we came in sight of the picturesque and beautiful lake of Egerdir, beyond which a range of bold and craggy mountains rose to a very great height directly from the water's edge. A further ride of three miles brought us, at half-past one, to Auschar, distant five hours from Yalobatch. The village contains from 50 to 60 houses, and is situated about two miles to the east of the lake, near what appeared to be its northern end.

About half a mile to the north of Auschar are two small conical tumuli on the S.E. side of a rich valley, extending several miles to the N.E.; and about two miles and a half W. by N. from the village is a high detached mountain, consisting of barren and shattered white scaglia limestone, compact and thick-bedded, in the numerous crevices of which a few stunted shrubs of valonea oak and dwarf ilex were growing. On reaching the summit I found a small oval platform 100 feet long by 40 or 50 wide, surrounded by a loose wall of large rough stones apparently intended for defence. The view over the lake was magnificent, and the vast expanse of water, spread out as it were at

our feet, was a most grateful sight after the barren plains and hills over which we had so long been travelling. But the shape of the lake was very different from what I had expected, for after contracting to a width of very little more than a mile, at a spot three miles to the west of the hill, it again suddenly expands, forming another large though less extensive sheet of water, which, although certainly part of the lake of Egerdir, is called in the country Hoïran Ghieul. Descending by another path I discovered, about 50 or 100 feet below the summit, the remains of a Cyclopian wall of the rudest construction; from the remarkable appearance of the hill there can be little doubt that in ancient times it must have been a fortress or place of defence, of which there were several in this part of the country; it may have been Lysinoe or Oroanda. Lower down was a narrow cleft or chasm in the rock, of great depth, of which I could not perceive the bottom. The people of Auschar said that it was full of water, and that the lake was supplied from it. I saw nothing of the kind, but several rock pigeons flew out while I was leaning over its mouth. They added that the lake contained plenty of fish, but that there were no fishermen, although they afterwards admitted that at Egerdir they fished during fifteen days of the year, that being the only time when the fish come up; but all this was evidently an excuse for their own laziness. The small village of Yeniji stands at the foot of the hill; I had not passed through it on my ascent, and I must observe, to the credit of the peasants in this part of the country, that when returning through it entirely alone, without a tatar or even a peasant for a guide, and in a Frank dress, I was not in the least incommoded or disturbed, either by the curiosity or impertinence of the inhabitants, although the whole population was out of doors, returning from their daily labours in the field, or pursuing their domestic avocations nearer home. The day had been particularly fine, and the atmosphere clear, and I never remember to have witnessed a more glorious sunset, or more brilliant

and deeper hues than were reflected from the mountains to the S.E. as I returned across the plain. They appeared like hills of purple, while the western sky glowed like a sea of molten gold.

Thursday, September 29.—Hafiz Agha endeavoured to persuade me to go to Egerdir by water, but I did not choose to trust myself to such fresh-water sailors, and crazy flat-bottomed boats, as the lake produced, and, notwithstanding his report of the extreme badness of the road, preferred trusting to my horse's legs. At half-past seven we left Auschar for Egerdir, nine hours. For the first eight miles the road led S. by W. along a barren plain between the mountains and the lake. At one mile from Auschar we crossed the river of Yalobatch, issuing from a deep ravine, at the mouth of which was the village of Gelendous. On this plain we met a dark and swarthy Euruque, whose occupation was in striking contrast with his appearance; he was armed to the teeth with pistol, dirk, and yataghan, leading a camel, and spinning a coarse black thread from a handful of goats' hair which he held in his hand. Their black tents are made of this coarse material, and consist of long pieces of cloth, supported by three poles and stretched out by six cords, so that they do not reach the ground, the upright part of the tent being generally made of reeds tied together. We also passed some strong and well-constructed carts, superior to any I had yet seen in Asia Minor. Soon after ten we reached a large ruined building near the lake, called a khan, where the mountains, becoming more wooded as we advanced, approached close to the water's edge. The northern end of the khan was built of large square stones, with projecting angles and towers for defence. An Arabic inscription was over one of the doors. In early days these khans in many parts of Asia served as places of refuge and safety from the wandering nomade tribes.

The road here led us close to the shore of the lake, and I had an opportunity of seeing one of their rude boats near

the bank. It was very shallow and flat-bottomed, with oars of a great length, and a huge gunwale of rushes as a precaution against being swamped. There was scarcely a ripple on the water, and yet it rolled as if in a gale. Soon after eleven we reached the café and guard-house of the Debrent, at the foot of a formidable pass up a steep path overhanging the lake, with the rock scarped away perpendicularly below it. The pass was guarded by five men placed there by the Governor of Egerdir, whose duty was to arrest any suspicious-looking traveller not provided with a teskereh. The Euruques never condescend to take one of these passports, but are always allowed to pass when travelling with their families, or even singly, when known in the neighbourhood.

After halting here a short time we ascended the pass, leading our horses, and reached the turning point with safety, notwithstanding the ill-paved road. For some distance we were winding along the steep side of the hill, until soon after twelve we reached a beautiful plain, surrounded by rocky hills, and covered with gardens and orchards of every kind of fruit-trees. Beyond this lovely spot a narrow plain extended for some distance along the borders of the lake, the scenery of which became more Italian as we approached its southern end. Here we saw many productive vineyards, and boats taking in wood and fruit for Egerdir on the opposite shore. The rocks consisted chiefly of red and green argillaceous schists, interstratified with bands of limestone and calcareous grit, underlying the thick formation of compact limestone, and dipping E.N.E. at an angle of 45°. These rocks have been thus disturbed by a considerable mass of trap or greenstone, which rises near the water's edge, and has been forced up amongst them.

At three, having reached the end of the lake, we descended from the hills into a plain about two miles wide, and bounded on either side by steep and wooded hills. This is raised only a few feet above the lake, of which

it seems to have been at some remote period the continuation, and it extends far towards the south. Traversing it near the beach we rounded the end of the lake, and on the western side crossed a deep, clear, and rapid river, flowing out of it to the south; the water had a very blue colour, and was said to be full of fish. From thence we continued above two miles N. by W., still along the water's edge, to Egerdir, passing by the ruins of an old castle, apparently Turkish, about a quarter of a mile from the river. Behind it rises a steep and lofty range of hills, which towards the town approaches so near to the water as to render it impossible to pass round the promontory without entering among the houses.

Notwithstanding the picturesque beauty of Egerdir at a distance, the illusion vanished on entering its narrow streets, which were most filthy. It contains 500 or 600 houses, all Turkish. The governor was unfortunately absent, or pretended to be so, and the Cadi, armed with a little brief authority, refused to give me a konak, adding that the Oda of the Menzil was good enough for a giaour. Perhaps it was, but that was no reason for his disobeying the firmahn, and I afterwards complained of him to the Mutzellim of Isbarta, who no doubt has made him pay for his disobedience, and given him a lesson of better behaviour to future travellers. At the extremity of the promontory above mentioned a rocky point trends into the lake, on which are the ruins of a substantial and picturesque Saracenic castle, built by Sultan Aladdin of Iconium. From thence I threaded my way through the dirty streets to the end of the point, where the broad blue lake, surrounded by rugged hills, just assuming the rich tints of sunset, lay stretched before me, while the foreground was broken by two beautiful little islands covered with trees; some red-roofed houses seen amidst the branches of tall and graceful poplars added to the picturesque effect. These islands contain about 150 houses, half of which are inhabited

by Armenians or Greeks. The river which flows out of the lake, after a course of about four hours, is said to form another lake twelve leagues in circumference, which, like that of Egerdir, contains six kinds of fish. Here it ceases to be seen, and having formed to itself a subterranean channel, does not re-appear until near Adalia, where it enters the sea. This however requires to be verified by actual inspection, for I do not attach much importance to the details of Turkish topography. The largest fish, I was told, are carp of seven okes weight, about sixteen pounds. With regard to the lake of Egerdir, they have a tradition that eight hundred years ago it was all dry land, and that a river ran through it until its course was stopped by a magician named Eflat.* They also assured me that eighteen years ago the lake subsided so much that no water ran off by the river. Probably some other subterranean katabothron afforded it an outlet.

Friday, September 30.—Egerdir to Isbarta six hours. At half-past seven we started from the Menzil, and, leaving the town, rode for nearly a mile and a half in a westerly direction along the shore of the lake. Thence we ascended a steep road over barren limestone rocks, and amidst numerous shrubs of dwarf ilex, valonea, and thorns, to the summit of the ridge, where we descended into a narrow and well-cultivated plain, over the greater part of which a well-paved causeway had been carried. From thence we emerged by a narrow valley into an extensive plain, surrounded by mountains, which to the N. and N.E. rose to a great height; at the foot of them was a small cassaba called Assar, scarcely perceptible, being buried amidst groves and orchards. At ten we passed a solitary minaret of brick, near a fountain, into the wall of which a beautiful fragment of a frieze or cornice had been inserted. My attention was here attracted by a mass of buildings in

* I think the origin of this fable may be traced in what I afterwards heard about the lake of Seidisheher (see vol. ii.), and the curious recurrence of the same name of Eflat or Eflatoun at the fountain near the lake of Beysheher.

the centre of the plain, which I rode off to examine; the greater part consisted of a wall or two piers of irregular rubble, with very hard cement, built upon foundations of large Hellenic blocks of white limestone. They appeared to mark the site of some Turkish structure, raised upon more ancient foundations; perhaps a ruined aqueduct: the joints fit very closely, and without cement; but no other ruins whatever exist in the neighbourhood. After regaining the road, the plain became considerably narrower, but again opened towards the S. after we had passed a curious old fountain, close to the road-side, when we changed our direction from W. to S.W.

As we traversed this sandy plain, oppressed by heat and dust, and scarcely relieved by a few light puffs of hot air, I was amused with watching numerous thin and almost transparent whirlwinds of sand, raised by the rotatory action of the wind, and traversing the plain at a distance, chiefly from N. to S.; as one was dispersed another grew into existence, and sometimes three or four might be seen at the same time. As we approached within a few miles of Isbarta, half concealed amidst orchards and gardens, and situated at the foot of a steep and lofty chain of mountains, which rises immediately to the south, partly covered with vineyards and fruit-trees, the view was very picturesque; although decidedly inferior in point of situation, it reminded me of Brusa. At 1h. 20m. we reached the city, and, after winding between gardens and orchards, were soon comfortably established in an excellent konak in the Greek quarter. A travelling Beyzadeh was here a great rarity, and the Greeks treated me as a prince. After dressing, washing, and shaving,—luxuries which I had not often time to indulge in,—they expected me to sit in their reception room, drinking coffee, smoking, and sipping perfumes and sherbet, and receiving a host of visitors. But the people of the house showed so much unaffected anxiety to make me comfortable, that I could not find it in my heart to turn sulky, and therefore paid them the com-

pliment of not shutting myself up with my books in my own room.

Amongst others the Mutzellim, Hadji Mehmet Agha, sent one of his officers, who had been in England with Nourri Effendi, and expressed himself much pleased with everything he had seen there, to welcome me on my arrival, and to express his wish that I would call upon him in the evening. Accordingly, at the appointed time, I proceeded to visit him at his konak, where I was certainly received with unexpected honours. The rediff turned out and presented arms on entering the gate, and when I acknowledged the salute, each man immediately raised his hand to his head, at the imminent risk of dropping his musket. The rediff, or newly-organized national guard, were marching up and down the court-yard, with drums and fifes playing; and, considering how short a time they had been organized, acquitted themselves remarkably well. Strict orders respecting their instruction had lately been received from Constantinople, and it was said that there were 300,000 now enrolled in Asia Minor and Roumelia, independently of the regular Nizam, whom they far surpass in their general appearance, being older and stouter men than the raw recruits of whom the army is composed, many of whom are merely boys. Hadji Mehmet Agha had organized four battalions, each of which was called out in turn, and did duty for three months. I was much pleased with his agreeable manners and rational conversation; he seemed active and intelligent, and in all respects superior to the generality of his countrymen. The inhabitants, both Turks and Rayahs, spoke of him with the greatest regard, and said that his rule was mild and equitable. Before I took leave, his horses, and he had several fine animals, of which he seemed justly proud, were paraded before him. He related to me how astonished he had been at the manner in which an Englishman, to whom he had some time ago sold a horse at Constantinople, concluded the bargain, paying

him at once the price asked, though thirty or forty pounds more than the horse was worth, or than he was prepared to take. On leaving him, two of his chavasses escorted me home. I could not account for the great civility with which he treated me, unless to make amends for the ill usage I had met with at Egerdir, of which Hafiz Agha would naturally have given an exaggerated report.

CHAPTER XXVIII.

Ruins of Sagalassus—Theatre—Tombs and Temple—Leave Isbarta—Buldur—Gum Tragacanth—Curious Caves near Buldur—Ancient Dwellings—Lake of Buldur—Ketziburlu—Deenair, anc. Apamea Cibotus—Mæander—Marsyas.

SATURDAY, October 1.—A lofty range of hills rises immediately to the south of Isbarta, on the southern flank of which is the modern village of Allahsún, built near the ruins of the ancient Sagalassus. Starting early from Isbarta, we ascended a narrow ravine behind the town, and along the banks of a clear and rapid stream, by which the town and gardens of Isbarta are at all seasons abundantly supplied with water. This stream, after flowing eastward through the plain for a few miles, suddenly turns to the south, and, after making its way through the mountains of Pisidia, and being joined by several others, is said to fall into the sea between Adalia and Aspendus. Trap rocks protrude through the scaglia limestone in many parts of the ravine; and a few miles from the town is a remarkable dome-shaped mass of trachyte, which in cooling has assumed a very peculiar form, consisting of large concentric masses, formed of numerous beds of small columns at right angles to the concentric layers, each of these layers being several feet in thickness. Higher up the valley thick beds of pumiceous tuff are seen resting against the grey or cream-coloured limestone. It would appear that a great valley of elevation, or fissure in the limestone, caused by the protrusion of the trachytic rocks, had been subsequently filled with volcanic mud and ashes. Half-way up the valley we passed the remains of an ancient bridge, and in two places fragments of columns, probably milestones, with mutilated inscriptions.

After ascending the ravine for an hour and a half, the hills opened into a spacious, rocky amphitheatre, at the foot of the ridge which forms the water-shed of the chain: this we ascended by a rocky and zigzag path over pumiceous tuff, and on reaching the summit again found trap rocks bursting out at the apex between two higher pinnacles or transverse ridges of limestone. We had a fine and wild view from the summit over a succession of mountain ranges well wooded, and extending far towards the south. The whole character of the country was now altered; instead of extensive plains, surrounded by wild and barren mountains separating them from each other, which we had left behind us, we looked over a succession of narrow valleys, well stocked with trees, and bounded by low and generally wooded hills. A short road led us directly from the summit, by a steep and narrow path, to the site of Sagalassus, instead of going round by Allahsún, to which place the horses proceeded, whilst I spent the day in examining the ruins of this interesting place, which have been partly described, and generally with great accuracy, by Mr. Arundel.

There is I believe no other ruined city in Asia Minor the situation and extensive remains of which are so striking or so interesting, or which give so perfect an idea of the magnificent combination of temples, palaces, porticoes, theatres, and gymnasia, fountains and tombs, which adorned the cities of the ancient world. Between the main portion of the town and the scarped cliff which rises to the north of it, an irregular terrace, partly natural and partly artificial, extends for nearly half a mile, following the outline of the hills, and rising gently towards the centre. Its general direction is from W.N.W. to E.S.E.; on it are the remains of several buildings, apparently temples or sepulchres; but at the western extremity is one which appears to have been a church, extending from S.E. to N.W. At its north-west end are the remains of a portico of fluted columns, and at the other extremity a high wall with an angular niche, and surmounted by a frieze and cornice. Within are

several shafts of fluted marble columns, some of granite very large and plain, and also many tiles lying on the ground: the length of the building is forty-five paces. Near it are the remains of a smaller circular building, which may have been a fountain. A massive wall once extended along the outer edge of the terrace, now only visible in places, and other buildings have been erected on it; near the centre are the remains of a small but beautiful temple, extending from north to south, in front of which are the fallen ruins of the portico and outer wall, with the shafts of fluted columns. To the S.E., at a lower level, are many walls and foundations, and heaps of columns, marble blocks, and pedestals; the ruins of other buildings cover the ground towards the south, and the remains of a magnificent theatre are seen to the east. In the face of the steep cliff, to the north, numerous niches and small sepulchral chambers have been excavated in the rock, while to the south rises a high and insulated conical hill, with the remains of a wall round its summit, agreeing with the description of the Acropolis given by Arrian in his account of Alexander's expedition, λοφὸς πρὸ τῆς πόλεως.*

But the most interesting building amidst these ruins is the theatre, which is both larger and better preserved than any I had yet seen, and which, from the circumstance of almost the whole of the scena being perfect, conveys an excellent idea of the appearance and distribution of a Greek theatre. Part of the proscenium has fallen in, but the seats of the cavea are, with scarcely an exception, as perfect and as level as the day they were placed; although the effect is perhaps slightly injured by two or three fine walnut-trees, growing amidst them. The diazoma and the interior gallery behind it are perfect, as well as most of the vomitoria which open from it, and the passages leading into the diazoma. There is no communication between the seats below, and those above the diazoma, which last were perhaps intended for a different class of people, and could only have been entered

* Arrian, lib. i. cap. 28.

from the hill above. Between the different cunei I only counted seven scalæ; they are very simple, and consist of two plain steps cut in each seat, which has no ornament or lion's claw at the end, as in the theatres of Azani, Trajanopolis, and Blaundus. It is built on the sloping side of a hill facing west, but itself faces S.W., so that whilst the left wing is excavated in the hill side, the right, or west side, is artificially built up. But the architect, in order probably to economize his materials and his labour, instead of raising one continuous circular wall, has supported the upper part of the theatre upon walls which radiate from the centre, and are arched over about half way up, thereby forming passages to serve as entrances to the gallery behind the diazoma. This gallery extends all round the theatre, even behind that part which is excavated in the hill, and is only blocked up at each end by the fallen fragments. The orchestra, which, as well as I could measure it, was 80 or 85 ft. in diameter, was much encumbered with the r uinsof the proscenium. Above the diazoma I counted seventeen seats, 2 ft. 1 in. in width, and 1 ft. 4 ins. in height, the lowest being 3 ft. 4 ins. wide. The width of the diazoma was 9 ft. 10 ins., below which were twenty-five seats, 2 ft. 2 ins. wide; the diameter of the theatre taken at the inner circumference of the upper row of seats is therefore something under 300 ft. The wall of the right wing of the cavea measured 112 ft., but I am not sure that it was a true radius.

The scena is unusually well preserved; in it are five doors, that in the centre measuring 8 ft. 7 ins. in width, the others only 5 ft. 6 ins. Three steps lead up to the threshold from the proscenium; a low wall extends in front of the scena, with pedestals between the doorways, which are thrown back nearly 5 ft. behind the front wall, and open into a long apartment 20 ft. wide, extending the whole length of the scena. The proscenium is destroyed, as is also the wall of the pulpitum; but they appear to have been 10 or 12 ft. above the orchestra. The wall of the right

wing of the cavea is nearly perfect, and forms a very considerable angle, perhaps 35°, with that of the scena.

The point of a hill 100 yards S. by E. from the theatre has been crowned with a handsome fluted column, the fragments of which, 3 ft. 9 ins. in diameter, are scattered about on all sides; the base, which measured 6 ft. square, overturned and displaced, was also lying near. The situation was very commanding, and from its vicinity to the Necropolis it was probably a sepulchral monument. On a rocky hill further east the ground was covered with sarcophagi, all of them broken open or displaced, with their covers lying near them. Some few of these tombs, excavated in the solid rock, had been afterwards covered with a stone slab; some were richly ornamented with garlands and festoons, some with the caput bovis, and others with a lion's head.

Proceeding S.W. into the town I passed numerous heaps of blocks of stone, marking the sites of ruined buildings, and reached a spot surrounded on all sides except the south by mounds or low hills supported by walls and terraces, and on which once stood temples and other public buildings. It was evidently an agora or forum; in many places the ancient pavement was still visible, strewed with the broken shafts of fluted columns and pedestals intended for statues; I saw no inscriptions, but it appears to have been surrounded with a colonnade of fluted columns. On the south a handsome flight of marble steps leads to a wide street, marked on each side by an avenue of pedestals, through which the road, a kind of Via sacra, passes to the ruins of a beautiful temple situated on a projecting point of rock. On one of these pedestals the inscription No. 189 has been preserved, by which we are enabled to fix with certainty the name of the city. The temple above mentioned is prostrate, but every part of it seems to be there, and it is still beautiful in its fall; the deeply fluted columns, the rich architrave, mouldings, and cornices, the graceful Corinthian capitals of the columns,

all attest its former loveliness; it is built partly on the solid rock, and partly on a platform supported by a wall of masonry. The old Cyclopian walls of the town may be again traced to the west of the Via sacra, lower down the hill, following its windings, and strengthened by several towers now in ruins. Further west also the slope of the hill is covered with remains of other walls and gateways; while to the N.W. a long row of fallen columns and marble blocks marks the position of an extensive colonnade or portico extending from E. to W.; but all is one scene of ruin and confusion; the marble has assumed the grey and corroded look of the barren hills on and amidst which it lies, and at a distance can scarcely be distinguished from any other mass of rocky fragments precipitated from the mountains overhead.

Numerous coveys of red-legged partridges dwelt amidst the ruins; I put up several, and might have had an excellent day's sport. Descending towards Allahsún, I passed through more ruins and Cyclopian walls to the narrow ridge, which connects the town with the above-mentioned λοφός or Acropolis, on which were many sepulchres and sarcophagi. A picturesque ride of two miles brought me to Allahsún, where I was most hospitably entertained in the konak of the absent Agha, and received a message from the mistress of the harem to say that I was welcome to remain there all night. In the burial-ground were many pedestals and blocks of marble from the ruins, but I could find no inscriptions, and we returned in the evening to Isbarta.

Sunday, October 2.—Before starting this morning for Buldur, I was much embarrassed by receiving as a present from Hadji Mehmet Agha a very handsome horse, but with what view or on what grounds I could not imagine, and I must confess that it was rather a source of annoyance. To have sent it back would have been more than unfriendly, and to have accepted it without making a suitable return would have lowered me in the eyes of the Turks. But

what could a traveller, carrying nothing with him but what was essentially necessary, offer in return? However, I made the groom and the officer who brought the horse suitable presents in money, and sent the Mutzellim my only pair of pistols, which, although rather small for a Turk, were very good, and had percussion locks; I added also a patent canister full of English powder, and some copper caps. A pretty good proof of the conviction I had gained, that travelling in Asia Minor was at this period unattended with any personal dangers.

From Isbarta to Buldur the distance is six hours: leaving the town at one P. M., we proceeded some way along the southern limit of the plain, and then mounted, by a narrow valley, to an elevated region, whence we descended by another ravine into the plain which surrounds the lake of Buldur; on reaching the low ground we changed our course from W. to S.W., and rode nearly six miles along the foot of the sand-hills on our left, with the lake on our right, apparently extending from N.E. to S.W. The country was dried up and uncultivated, except in the immediate neighbourhood of a few small streams, the banks of which were studded with vineyards, gardens, and orchards. At half-past five we were near Buldur, situated on the sloping sides of the hills which rise up like an amphitheatre in a semicircular form, in advance of which are several lower hills covered with houses. The town with the suburbs covers a large space of ground, as many of the houses have gardens attached to them. The whole presents a striking and picturesque appearance.

Monday, October 3.—Buldur is said to contain 5000 houses, of which a considerable proportion are Greek. I visited the bazaars, which were crowded with a picturesque collection of motley groups from the neighbouring villages. The only peculiar production which I observed was a white flaky gum, brought in by the peasants, and exposed in large quantities for sale. It is the gum tragacanth, called by the

Turks "ketereh," under which name large quantities of it are sent to Smyrna. It is collected on the neighbouring hills from a low prickly plant, resembling a species of furze. The gum is obtained by making an incision in the stem near the root, and cutting through the pith, when the sap exudes in a day or two, and hardens in the opening, after which it is collected by the peasants. Its price was thirty-six piastres per oke, or about 3*s*. 2*d*. the lb.

Having heard of some curious caverns at Kadekli in a ravine near the spot, where I yesterday entered the plain of Buldur, I determined to visit them this afternoon, instead of proceeding to Ketziburlu, and accordingly started, under the guidance of a Greek my landlord's brother. We proceeded nearly five miles along the road to Isbarta, but before reaching the village of Güschler we turned off to the right, ascending the low hills to the village of Iskeri, situated at the mouth of a deep and narrow ravine, and at the foot of the hills which form the S.E. boundary of the plain. Before we reached the village, however, we entered the ravine, ascending the bed of a small stream, which, after turning several mills, waters the gardens and orchards we had passed the preceding day between Iskeri and Güschler. The ravine closed in gradually as we ascended; the cliffs on each side became more perpendicular, until at length they approached so near as to leave only a passage of four or five feet, through which the river rushed, occupying the whole space. After passing this wild defile, rendered still more picturesque by the large trees which overshadowed it, the cliffs retired a little on either side, and I found myself in a deep, oval amphitheatre, surrounded by high and perpendicular cliffs, perforated on all sides by curious caverns and excavations.

Some of these were open in front, others only gave evidence of their existence by long, narrow windings leading to them; those below were accessible from the sloping talus of the hill, but the upper caverns had no apparent external means of approach, and could only be reached by

a singular contrivance: at the back of one of the lower chambers a small opening led into a dark and narrow chimney about three feet square, on two sides of which, opposite to each other, small holes were scooped out, one above the other, twelve or fourteen inches apart; by placing our feet in two of these cavities, and our hands in two others above, and then drawing ourselves up, we were able to ascend about twenty or thirty feet, to an upper tier of chambers of the same kind, having windows looking out into the ravine. A continuation of the same narrow chimney led to a still higher tier, from whence a dark and rugged flight of twenty high steps cut in the solid rock conducted us to a large and vaulted chamber, also excavated in the same way, about thirty feet long and twelve wide, and having on each side several passages communicating with other smaller apartments or cells. In none did I perceive the slightest symptom of inscription or ornament, or anything to indicate, however remotely, the period of their formation or occupation. In the larger chamber only I saw a few small niches, but in none of the others was there anything of the sort, as is usual in real sepulchral chambers; I am therefore inclined to look upon them as the dwelling places of the earliest inhabitants of the country, perhaps the ancient Pisidians or Solymi, or others who, like the Homonadenses, are described by Strabo* as living in caves and occupying rocky fastnesses. The situation of Buldur on the frontiers of Lycia and Pisidia well agrees with the position which the Solymi are generally admitted to have occupied; and the lake of the same name may possibly be alluded to in the verses of the poet Chœrilus, πλατέῃ παρὰ λίμνῃ.†

The rock in which these caves are cut is a soft pumiceous tuff, less compact than that of Kirk Hinn, dipping slightly N.E. and overlying a formation of alternating hard and soft beds of marl, calcareous marl and sand, all of which

* Strabo, lib. xii. p. 569.

† Cramer, Asia Minor, vol. ii. p. 267.

are much softer than the pumiceous bed which contains the caves.

Tuesday, October 4.—Returning from Kadekli yesterday evening my guide amused me with a long account of ruins on the opposite side of the lake, which he proposed I should visit to-day; when however the morning came, all sorts of excuses and difficulties were made to prevent my going there. He said that although only one hour across the lake, the distance was much greater by land. Then my host said that the boats were unsafe, and neither he nor his brother would venture to go. The next excuse was that there were no boats at all. Then again the distance was too great, and at last my guide of yesterday said he could not go without his brother's leave, adding that he had never seen them himself, but had only heard of their existence from others; and I was at length compelled to give it up, and order horses for Ketziburlu; and I began to suspect either that there were no ruins to be seen, or that Hafiz Agha, impatient at my delaying another day on the road, was at the bottom of the scheme.

We started at nine for Ketziburlu, six hours. Soon after leaving Buldur, where I had observed a few fragments of columns, some of them fluted, and having copied a short inscription,* we quitted the Isbarta road, and keeping a more northerly course across the plain, reached in a few miles the borders of the lake. The country was flat, stony, and uncultivated, and much cut up by rapid torrents, which in the rainy season, rushing down from the neighbouring hills, have worn deep beds in the sandy soil. Here in some few places were slight attempts at cultivation, and particularly below Iskeri, where we passed through several considerable gardens and orchards watered by the stream which flows down the valley of Kadekli.

On reaching the borders of the lake the banks were so soft and muddy that I had great difficulty in getting near enough to taste the water, which, instead of being so

* See Appendix, No. 190.

strongly impregnated with salt as to enable the inhabitants to collect it from the shores after the waters had dried up, was only slightly brackish, with a strong taste and smell of sulphuretted hydrogen gas. It was very shallow; and so far from its being impossible for birds and other animals to live in it, immense flocks of wild fowl were swimming on the surface; these were chiefly coots, with a few wild ducks, and a large white wading bird with long black legs and beak. It is therefore impossible that this can be the Palus Ascania mentioned by Arrian* as being in Alexander's line of march from Sagalassus into Phrygia, and of which he says that the salt crystallizes naturally, and that the inhabitants use no other. It has evidently been confounded by modern travellers and geographers† with another not far off, which agrees with Arrian's description. It may, however, possibly be the lake alluded to under the same name of Ascania by Pliny,‡ who remarks that the water at the surface was fresh, while that below was nitrous.

Passing round the head or N.E. extremity of the lake, I observed an extensive plain to the N.E.; and on our left a long but broken wooden causeway stretching across the head of the lake through the water at some distance from the shore. From thence traversing the marshes we continued N.N.E., along the foot of the hills on our left, until at two P.M. we reached Ketziburlu, a straggling village of about 100 houses, surrounded with gardens and orchards, which extend into the plain on the east. An insulated conical hill, a bare mass of limestone, rises immediately to the east of the village, on the summit of which are the ruins of a Turkish Tekiyeh or shrine.

We were now approaching the high country whence issue the feeders of the Mæander. I was told that three hours to the north, on the road to Sandukli, a large river suddenly rises in the midst of a Turcoman village in the

* Arrian, lib. i. c. 29.

† Col. Leake, Tour in Asia Minor, p. 145.

‡ Plin. Hist. Nat., lib. xxxi. c. 10. Cramer, Asia Minor, vol. ii. p. 297.

plain of Dombai, which, after flowing some way across the plain, disappears at the foot of the limestone hills, and reappears again close to Deenair, where it turns a mill, and then falls into the Mæander. In the walls of several houses in the village of Ketziburlu I observed many fragments of ancient sculpture, and broken shafts of columns. Arundel has already shown that this could not have been the site of Apollonia.

Wednesday, October 5.—Ketziburlu to Deenair four hours. Soon after leaving the former we quitted the valley leading to Dombai, along which runs the road to Constantinople, and ascended the limestone hills to the west. A rapid ascent soon brought us to the summit, consisting of scaglia limestone, in which I found many nummulites and a few terebratulæ, as we descended to a wide rich vale, studded with wild pear-trees, and backed on either side by lofty and wooded hills. The grass was burnt up, but the whole formed a beautiful natural park, the base of the hills terminating with a gently sloping talus, covered with dwarf ilex. Our road led for several miles N.W., along the foot of the hills which we had just crossed, and which separate the plain of Deenair from that of Dombai.

Eight miles from Ketziburlu we reached the small village of Ikedji; in the burial-ground were several fragments of columns, and other architectural remains, with a Greek sepulchral inscription, and another in Latin, in honour of the Emperor Maximian.* Here too I saw the first springs of water flowing westward into the Mæander, and a mile and a half further reached a clear and beautiful stream flowing rapidly from a small ravine on the right. It struck me that this might be the Mæander; and accordingly leaving the baggage, I ascended the hill-side above the bed of the stream as it flowed through reeds and rushes, in order to ascertain from whence it took its rise. In a few minutes I reached a small plain, watered by the same stream issuing

* See Appendix, No. 192.

from a lake nearly two miles in circumference, full of reeds and rushes, water-lilies and wild ducks, and surrounded on almost every side by steep and lofty mountains. After exploring its banks it was evident that no waters flowed into it, and that it was entirely supplied by subaqueous springs. The reeds grow to a very great height, but the bottom was too muddy for me to obtain any of the longest. I was much pleased with this discovery of what I at once concluded to be the source of the celebrated Mæander. I thought too, at the time, that the lake was that of Aulocrenis: but in this I was mistaken—the lake of Aulocrenis is in the plain of Dombai; but this is the lake alluded to by Pliny, who says, after describing the great valley of Aulocrenis, "Amnis Mæander ortus e lacu in monte Aulocrene."* Thus we have a lake, a valley, and a mountain, all bearing severally the name of Aulocrenis. The valley, where the contest took place between Apollo and Marsyas, must have been a portion of the plain of Dombai, to the east of these hills, which I examined the following year.

Leaving this beautiful lake we ascended a low ridge of hills to the west, from whence we looked down upon the town and plain of Deenair, and distinctly traced the Mæander flowing through the plain on the left, not far from the foot of the hills; descending the hills and passing behind the gardens and vineyards of this straggling place, after winding through its dirty streets, I rejoined my companions at the konak at one P.M. The antiquities and inscriptions of Deenair have been fully described by Mr. Arundel in his two visits to this place. I spent some time in copying the latter,† and in exploring the site of the theatre and other buildings.

Thursday, October 6.—A clear and rapid river flows through Deenair, issuing from a narrow glen behind it to the N.E., which on reaching the plain joins the Mæander at

* Plin. H. N. lib. v. c. 29–31; lib. xvi. c. 89.

† See Appendix, Nos. 193–206.

a short distance from the town. This morning, after visiting the junction of the two rivers in the plain, I procured a guide to conduct me to the sources of this second river, said to be little more than a mile distant. Here at the base of a rocky cliff a considerable stream of water gushes out with great rapidity, and flows down the narrow channel with considerable force, the noise of which, notwithstanding a high wind, I had heard on the hills above. It was impossible not to perceive at once that this was the Marsyas or Catarrhactes described by Herodotus as rising in the Agora of Celænæ, and by Strabo as rushing down with great noise and rapidity.* It appeared as if it had formerly risen in the centre of a great cavern, and that the surrounding rocks had fallen in from the cliff above. This may have been the Acropolis of Celænæ, although its situation hardly justifies the prudent measures of Alexander, who was unwilling to attack it on account of its extreme strength; at least I could not detect any remarkable point sufficiently lofty, or so difficult of access as to be deserving of such particular caution. The whole range of hills was steep, rugged, and full of broken precipices, but not to be compared for strength with the position of Sagalassus, the taking of which by storm had been described by Arrian just before.† It is therefore possible that, although this source of the Marsyas and the cliff above it were within the city, the Acropolis may have been further to the N.E., where Mr. Arundel describes the existence of an extensive Necropolis.

After examining the whole of the country in the vicinity of Deenair, the course of the various rivers, and its distance from those places, the situations of which are ascertained, I have no doubt that it stands upon the site of Apamea Cibotus, to which place the inhabitants of Celænæ were removed by Antiochus Soter, who is said to have named the new town after his mother Apama. All the ancient authorities which allude to this place, from Xenophon and

* Herod. lib. vii. c. 26. Strabo, lib. xii. p. 578.

† Arrian, lib. i. c. 29.

Herodotus down to Maximus Tyrius, will be found in Colonel Leake's Tour in Asia Minor;* and there is scarcely an incident recorded or a feature of the surrounding district described in any of them, which cannot be reconciled with the present state of the country. It is unnecessary to refer to each of these authors to prove the fact; and I shall only observe that the extensive plain, in which the junction of the two rivers takes place, coincides also with the description of the park of Cyrus, by Xenophon, who adds that the Marsyas rose in a cavern. This too was the cavern in which Apollo hung up the skin of his opponent after the celebrated contest in the valley of Aulocrenis. It may have fallen in during some of the earthquakes by which, according to Nicolaus of Damascus, the neighbourhood of Apamea was frequently injured. Tacitus also relates that during the reign of Claudius Apamea had suffered to such a degree from the same cause that it was exempted from taxes for five years. The effects, however, have not been so great as to produce any serious discrepancies between the accounts of the ancients and the present appearance of the country.†

I looked in vain for any confirmation of the suggestion thrown out by Colonel Leake that the ancient name of Celænæ was derived from the burnt or blackened appearance of the rocks in the neighbourhood; they are all, without exception, of a greyish white or cream-coloured limestone. In the rock which overhangs the sources of the Marsyas I found many nummulites, besides broken fragments of other bivalve shells, and a longer search might perhaps have produced a richer harvest. The rocks belong to the great scaglia formation, the chief material of the Taurus range, of which indeed these hills may be considered as a branch.

I cannot leave this account of the topography of Celænæ without noticing an error, into which Gibbon has been

* Leake, Tour in Asia Minor, p. 158.

† Cramer, Asia Minor, vol. ii. p. 50. Arundel, Seven Churches. Arundel, Asia Minor.

drawn by his authorities, from not being better acquainted with the localities which he describes. Speaking of the rebellion of Tribigild, A.D. 399, he writes as if a large extent of country existed between the Marsyas and the Mæander, when he says "the vineyards and fruitful fields between the rapid Marsyas and the winding Mæander were consumed with fire."*

Besides the two rivers above mentioned a small stream rises at the foot of the hills to the west, which, after flowing a short way through the plain, falls into the Mæander immediately below the town.

* Decline and Fall, ch. 32.

CHAPTER XXIX.

Leave Deenair—Chardak Ghieul—Anava lacus—Ascania palus—Salt lake—Petrifying springs—Chonos—Colossæ—Subterranean course of the Lycus—Bounar Bashi—Denizli—Laodicea—Hierapolis—Incrusted cliff—Hot springs—Tombs—Tchoruk Sú—Ak Khan.

AT half-past twelve we started from Deenair, and crossing the Mæander proceeded for nearly three miles over the plain to the S.W. of the town, perhaps the site of the park of Cyrus. We then ascended a low ridge of white cretaceous hills, part of the extensive horizontal lacustrine formation which occupies a large space in the interior of Asia Minor, and of which this appears to be the most southern portion. At two we had reached the summit of the ridge, and immediately commenced a gentle descent over an undulating but barren and burnt-up country. The lake of Chardak, sometimes called Hadji Tous Ghieul, appeared about ten miles off to the S.W.; its nearest point, however, was not above five miles from us to the south; in winter it covers a considerable space of ground, extending nearly sixteen miles from E. to W., but only three or four from N. to S., and was now nearly dry; this, however, was not visible until a nearer approach showed that only a small portion of its bed was really under water, the rest being soft mud covered with a thick saline incrustation. In the plain between us and the lake were many tents of Turcomans and Euruques, with camels grazing in every direction. A steep and partly wooded range of hills rose to a considerable height on the other side of the lake, forming the southern boundary of the province of Phrygia, and extending from the Taurus to Mount Cadmus. We reached Balat, a small village six hours from Deenair,

soon after sunset, having had for the last few miles a low range of hills on our right, consisting of alternating beds of sand and conglomerate, dipping N. and N.N.W. at an angle of 20°, and underlying the white cretaceous formation. The pebbles of the conglomerate were quartz, quartzose schist, limestone, and a cherty flint.

Friday, October 7.—At half-past eight we started for Kaklek, distant eight hours. Leaving Balat, we descended to the shores of the lake, and continued for several miles between it and the conglomerate rocks on our right. Here we fell in with a large tribe of Euruques marching from one pasture to another: the men were all on horseback, the women on foot led the asses and mares laden with the tents and utensils. The infants and younger children were carefully strapped aloft on the baggage-horses, while the elder ones brought up the rear, driving the herds and flocks before them. Each family seemed to possess an old cock, tied by the leg on the top of one of the loads. The villagers complained much of their constant migrations, and the injury done to their corn and crops by the straggling cattle; they pay but a trifling contribution to the governors, and are exempt from the obligation of furnishing recruits for the army. It would almost seem as if a recollection of their own origin, and a predilection for the charms of a wandering life, had disposed the Turkish Government to look upon these migratory hordes with sympathy and indulgence, though from motives of policy they endeavour to induce them to adopt more stationary habits.

As we reached the western termination of the lake, the hills on our right rose to a great height, forming precipitous and lofty cliffs: the highest point, called Besh Parmak (or five fingers), which from its insulated position must be visible from a great distance, forms the southern point of a ridge of hills which extends north nearly to Ishekli. After passing this hill, we halted near the extremity of the lake to observe the process of collecting the salt, at which the inhabitants of the neighbouring village of Chardak were

busily employed. The lake being nearly dry, the water in the centre is so thoroughly saturated that, owing to the great evaporation constantly going on, the salt crystallizes on the surface, and is scraped off with large wooden spades. I attempted to ride over the mud along the path used by the salt-collectors, but after proceeding a few hundred yards the ground became so soft that I was obliged to make a hasty retreat to the shore. The mud was covered with a thin coat of salt, which gradually thickened towards the centre; it is therefore probable, from the thin deposit near the edge, that in winter when the lake is full, the water is not sufficiently saturated to enable the peasants to collect the salt in this manner. As it is obtained, it is brought on shore, and placed in large heaps along the banks, where it appeared clear and in large crystals; it is procured in considerable quantities, and sells for 10 paras the oke, or about a farthing a pound; and, after supplying the neighbouring country, the rest is sent to Smyrna. The lake belongs to the town of Denizli, and is rented for 300 piastres per annum; but the contractor has no trouble with it; he does not collect the salt himself, but receives 10 piastres from every one who comes to fetch it, whatever may be the quantity he collects, and whether he loads one or ten asses, horses, or camels. A species of salicornia grows upon the banks.

This is evidently (as I believe Arundel has already suggested) the Anava lacus of the ancients, mentioned by Herodotus, who not only alludes to its being salt, but places it on the line of march of Xerxes' army, between Colossæ and Celænæ.* I am also disposed to look upon it as the Ascania palus mentioned by Arrian,† which Alexander may have passed on his way from Sagalassus to Apamea. On this subject Colonel Leake‡ has remarked the great discrepancy in the accounts of Arrian and Strabo with regard to the distance between Sagalassus and Apa-

* Herodotus, lib. vii. c. 30. † Arrian, lib. i. c. 29.
‡ Tour in Asia Minor, p. 151.

mea. According to the latter, Sagalassus was one day's journey from Apamea, whereas Arrian relates that Alexander was five days marching from Sagalassus to Celænæ, passing by the lake Ascania. Now, the real distance from Sagalassus to Celænæ, passing by the north end of the lake of Buldur, is thirty-four or thirty-five miles, which is compatible with Strabo's account of one day's journey. This is the direct road; and the very circumstance of Arrian's mentioning the places by which Alexander passed would lead us to infer that he had preferred another which was more circuitous, and had gone out of his way and passed by the Ascanian lake. The road from Sagalassus to Celænæ, to the south of the lake of Buldur, and round the west end of that of Chardak, is about eighty-five miles, which would give a march of seventeen miles for each of the five days that Alexander employed. This, in connection with the fact of the salt being obtained in the Chardak lake, appears to me conclusive as to this being the real Ascania palus of Arrian, though it may also have been known in the time of Herodotus by the name of Anava. I may add here that no stream flows out of it to the west.

Quitting the lake at twelve o'clock, we ascended a plain sloping gently to the east, and after three miles passed a large ruined khan, of fine Saracenic architecture, 200 yards to the west of the village of Chardak. The building consisted of an outer and inner apartment, the latter of which was supported by four rows of columns or pilasters, forming five rows of arcades. The doorway was very handsome, with an Arabic or Cufic inscription, and a rude representation of a lion on each side. The walls also contained several fragments of cornices and blocks of hewn marble. From thence we continued to ascend for nearly two miles, when we began a gentle descent, and presently entered a dry torrent bed, which we followed for several miles, with a fine range of undulating wooded hills on our right. A few miles lower down the valley

again widened into a small plain, intersected by the winding bed of the torrent, which has made for itself a gorge, fifteen or eighteen feet deep, and not above four or five wide; its perpendicular sides exhibited a good section of the alluvium of the plain, consisting of alternating sands and gravels passing into each other.

Here we met a caravan from Smyrna, in which was one of the fine camels of the Crimea, with a long and shaggy coat of hair, and two humps. This is the species called Camelus Bactrianus. The dromedary of Egypt, by some said to have two humps, has, like all other dromedaries, only one; it owes its distinguishing appellative to its peculiar fitness for rapid travelling. At four we quitted the valley, and, crossing a low ridge of hills on the left, soon reached the village of Kaklek, chiefly inhabited by Turcomans and Xebeques; some of these last we saw to-day for the first time.

Saturday, October 8. Kaklek to Chonos four hours.—A mile and a half after leaving Kaklek my attention was attracted by the curious appearance of the steep hills on the left, where a large stream of water was flowing in numerous rills over a hard and whitened talus. On a closer examination, it proved to be so highly charged with lime as to possess extraordinary petrifying qualities, and to be incrusting with a thick coat of calcareous sediment whatever it touched; the sloping talus was formed by the stream which issued from the foot of the cliff, falling over a mass of travertine formed by its own deposit. This fall has been made use of to turn several mills, but not with great success. One of the mills, together with its pipes and waterducts, has been completely incrusted by the deposit, and, with its stalactitic covering, presents a grotesque and rather melancholy appearance. At the bottom of the slope the greater portion of the stream flows along a channel of its own formation, which, by successive depositions of calcareous particles, assisted by the evaporation of the water, has been gradually raised to a height of several feet; the

remainder is lost in a pool at the foot of the hills. A little farther to the west another rugged cliff has assumed the appearance of a frozen cascade, as if the water had been suddenly arrested and petrified in the act of leaping from rock to rock; above this is a beautiful pool of deep blue water, the spring from whence the stream which formed the cascade had issued. The flat rock on which I stood was hollow underneath, and the deep water could be seen extending far beneath the treacherous crust all round the pool. The opening was about fifty feet long by ten wide, and of great depth; its effect was increased by the milky-blue colour of the water. Another stream of the same character flowed near it, rather more to the west, issuing from the rocks above, which consisted of brecciated scaglia covered with a calcareous incrustation; tracing it to its source I mounted to what appeared to be a cavern, but was in fact a dark and deep chasm in the rock, with rugged and uneven sides; the sound of a subterranean river rushing along a narrow bed, or tumbling over precipices in the dark depths beneath, was distinctly audible.

I traced the chasm some way up the hill, but the noise of the stream was gradually lost; a bold miller, who had penetrated into the chasm until he found the water, had conveyed a portion of it in wooden pipes, supported by beams laid across, for the supply of his mill. As we left these curious springs, the self-formed water-channels were seen extending far into the plain, as well as a remarkable circular mass of tuffa, apparently the produce of an extinct calcareous spring, which once bubbled up on this spot.

When we consider the proximity of these springs to those of Hierapolis, the beautiful deposit and white incrustations of which have been already so graphically described by Chandler, and also bear in mind the singular features of Colossæ, which I shall presently explain, it is impossible not to imagine that there must be some connection between all these phænomena, or to avoid attributing them to the

same origin. We would also inquire what can have been the powerful solvent which has acted upon the calcareous rocks through which these waters flow, and charged them with so large a proportion of calcareous particles? May we not find this solvent in the saline matter of the neighbouring hills?

From Kaklek to Chonos our course was nearly S.W. At the sixth mile we crossed a clear and rapid stream flowing W.N.W. from a wooded ravine on our left, having its sources apparently in a lofty chain of mountains visible to the S.E. On our right was a plain extending to the west, down which this river, probably the ancient Lycus, flowed towards the Mæander. At eleven we reached Chonos, a large and straggling village of 200 houses, twenty or thirty of which are Greek. It is said to have contained formerly three times that number of houses, or rather families, but it has suffered much of late years. Chonos is situated on a rising bank sloping gently towards the north, on which much tobacco is grown, 12,000 okes being sold annually to the Turcoman tribes and peasants in the neighbourhood. Many fine walnut-trees are seen in the grounds about the village.

This place derives its interest from standing on the site of Chonæ, a town which grew into importance on the destruction of Colossæ, situated in its immediate vicinity, and one of the most interesting and flourishing cities of Asia Minor. Chonæ is chiefly known from being the birthplace of Nicetas, the Byzantine historian, whence his name of Choniates; the magnificent church, dedicated to the archangel Michael, was burnt by the Turks. It has been visited and described by Mr. Arundel,* who mentions the existence of numerous columns and other fragments of antiquity in all the walls and houses. The only remains of buildings are the ruins of a castle on a rocky platform above the village, and at the foot of a steep and precipitous range of mountains, from which a small stream,

* Arundel, Seven Churches, p. 92.

after descending through a deep and narrow gorge to the west of the castle, flows into the plain, and supplies the village with water. These ruins appear to have been mistaken for those of Colossæ; and there is great confusion in Mr. Arundel's account of the neighbouring rivers, as well as in his explanation of the disappearance of the Lycus, mentioned by Herodotus* as occurring in the town itself. My object was, if possible, to clear up these doubts, and thus ascertain the real site of Colossæ; and after making many inquiries and ascertaining that about three miles off in the plain to the north there were ruins and large stones, I sent for horses and started to explore them.

In about a mile I reached the level ground, and entered a tract of gardens and orchards, vineyards and melon-grounds, well shaded by large fruit-trees, and watered by a considerable stream flowing from west to east: this surprised me, as the river in the plain flows from east to west. Another mile brought me to a field full of large blocks of stone and foundations of buildings, with fragments of columns and broken pottery strewed upon the ground. Others were strewed about on all sides, and the road was lined with marble blocks from ancient buildings, amongst which were fragments of columns, architraves, and cornices. A little farther, near the road-side, was the hollow Cavea of a theatre, built on the side of a low sloping hill, and of which several seats were still *in situ*; some traces of the wall of the right wing were also visible: a grassy sward covered nearly the whole space.

A little way beyond the theatre we crossed a small bridge over a rapid stream flowing from east to west, and formed by the junction of three rivers which unite their waters immediately above the bridge. The principal stream is called the Tchoruk; this also flows from east to west through the plain, receiving several tributaries from the mountains, and is probably the ancient Lycus. The second falls into it from the south; it is the same which I had crossed on

* Lib. vii. c. 30.

the road from Chonos, and serves to irrigate the gardens; it rises in a copious spring called Bounar Bashi, at the foot of a steep and lofty mountain, about a mile and a half on the road from Chonos to Denizli. The third stream is called Ak Sú (or white water) by the Turks; it comes from the N.W., is possessed of highly petrifying qualities, and flows in several channels, falling into the main stream both above and below the bridge. The ground, consisting of a soft white travertine, has been evidently formed by the river, as well as the several low natural water-conduits which traverse it in various directions. Below the bridge the rivers fall into a deep hollow, in which are several mills, and a short way lower down the united stream flows through a deep and narrow chasm in the rocks.

Beyond the bridge are the ruins of a large oblong building, near which are four massive pilasters of loose rubble, cased with large blocks of stone; the natives call them churches. Farther to the N.W. is another heap of ruins, covering a considerable space of ground, with remains of what at first seemed to have been a pavement; and both here and at another similar mass of ruins a hundred yards farther in the same direction, are many rude grotesque-shaped pedestals resembling elongated truncated pyramids, the intention and meaning of which puzzled me very much. At length it appeared that what I had at first mistaken for pavements were the covers of sepulchres and sarcophagi cut in the rocky ground, and so close to each other, that when the covers were laid on they resembled a pavement formed of gigantic blocks; the grotesque pedestals had been placed upon them as cippi; as I found one of them still occupying its original position.

Here, then, I was in the midst of the Necropolis of Colossæ, the town itself having occupied the opposite side of the river, where are the theatre and other ruins. I had still to satisfy myself respecting the statements of Herodotus and others concerning the disappearance of the river and other remarkable phænomena connected with

it. According to both Herodotus and Xenophon, Colossæ was between Laodicea and Celænæ; but Herodotus states that the Lycus disappeared in the town of Colossæ, and flowed for five stadia through the chasm, after which it fell into the Mæander. Mr. Arundel looked in vain to the mountains for a place, where a natural and copious spring should exhibit the re-emergence of a river after a subterranean course, and does not appear to have visited this spot in the middle of the plain. On examining the narrow gorge below the bridge, through which the united rivers flow, I found that the Ak Sú (white water) had formerly fallen into the Lycus lower down than where it now joins it, in fact exactly where the chasm is the narrowest; another large stream also falls over the cliff on the south side of the river, equally possessed of strong petrifying or incrusting qualities, and exemplifying in a remarkable manner the formation of these cliffs of travertine, and the burying or silting up of whatever plants or other substances might be in its way. This petrifying stream now falls over a thickly-wooded bank, although it appears formerly to have flowed over the cliff lower down, having been diverted from its former course by the gradual accumulation of its own deposit. The western extremity of this wooded cliff, which is close to the narrow gorge, is completely incrusted; and the rich vegetation, enveloped in a destructive garb of stone, has lost every trace of beauty. This dreary covering gradually ceases towards the east; and, after passing through every stage and gradation of incrustation, the cliff re-appears at the eastern end clothed with a luxuriant vegetation; yet even here the stream already trickles with its deceitful drops over the flourishing shrubs and plants, which it is slowly beginning to inclose in its stony case, and, as the incrustation becomes complete in any one spot, the stream of water is checked, and forced to flow in a new line.

By this operation the cliffs on either side have been gradually formed; and it is evident that if the water always flowed in the same channel, these cliffs would approach each

other, and continue to overhang the river until a natural bridge was completed by the touching of the opposite sides, while the arch or passage of the river below would be kept clear, the rapidity of the stream not allowing the deposition of the calcareous matter. It is indeed most apparent that this has been the case, that the two cliffs have been here joined, and thus formed the χάσμα γῆς through which, as Herodotus reports, the water flowed by a subterranean channel for half a mile, the soft crust having been in all probability subsequently broken up by an earthquake. I have already mentioned that in the hollow below the bridge are several mills which are turned by the petrifying stream of the Ak Sú; in consequence of the rapid accumulation of calcareous matter, it has been frequently necessary to change their position; they would otherwise be soon choked up, and buried in the calcareous silt deposited round them by the spray and overflowings of the mill-stream.

There can be no doubt that this is the spot within the city of Colossæ, where Herodotus describes the disappearance of the Lycus, although it may still remain a question which of these two rivers was the real Lycus, whether that now flowing through the centre of the plain, or the remarkable stream of which the modern Turkish name of Ak Sú expresses the colour of its water. But in confirmation of this position of Colossæ, I may mention an expression in the work of the Byzantine historian Curopalates, already quoted, but not correctly understood by Mr. Arundel, owing to his not having visited the spot, and not having found the real χάσμα γῆς. It proves that this must be the Colossian subterranean course of the Lycus, for in allusion to it he says, ἐν ὥπερ οἱ παρρέοντες ποταμοὶ ἐκεῖσε χωνευόμενοι, referring in the most decisive manner to the existence of several rivers uniting their streams just above the narrow gorge.*

There is also a passage in Pliny† which bears in an in-

* Arundel, Asia Minor, vol. ii. p. 179. Curopalates, Hist., p. 652.

† Hist. Nat., lib. xxxi. c. 20.

teresting manner upon this subject; he says, "There is a river at Colossæ which will convert brick into stone." The Ak Sú, which joins the Tchoruk in the centre of the town, would soon cover a brick with a thick incrustation, and even fill the porous interior with the same substance by means of infiltration; and, whatever may be the popular acceptation of the word petrifying, the words of Pliny cannot mean anything else than the phænomenon which has been described.

Sunday, October 9.—Chonos to Denizli four hours. Our course was nearly due west, Denizli being, by meridian observation of the sun, one mile north of the former. A mile and a half from Chonos, we passed the source of a copious stream under the lofty rocks to the left of the road, the same which I had crossed on my way to the ruins of Colossæ. A portion of it is carried by canals along the slope of the hill to the east as high as possible, thereby forming the limit of the rich vegetation of the gardens. It is called the Bounar Bashi Sú, and has been considered by Arundel as the Lycus of the ancients; he supposes it to be the re-emergement of a river lost on the other side of the hills, but the nature of the country is against it. We now ascended low hills covered with calcareous incrustations, and presently crossed another stream charged with much calcareous matter, a deposit of which extends to the banks of the Lycus, near its junction with the Ak Sú.

Two miles farther, descending from a ridge of sandstone hills, we crossed a stream flowing from the south towards the Lycus; and four miles farther, after another intervening range of hills, covered with dwarf ilex and intersected by numerous ravines, we traversed a second considerable river flowing rapidly from a deep valley on the left. This river is called the Gieuk Bounar, and is probably the Cadmus of ancient geographers. Soon afterwards we entered the richly cultivated plain of Denizli, winding along narrow roads between gardens and orchards, divided into small enclosures by hedgerows of fruit-trees, elms, and oaks, with

vines laden with rich clusters of fruit trained to them, and forming a most grateful shade. In the fields Indian corn was chiefly grown; the whole appearance of the country was rich, and at times a sudden gap in the trees or a turn in the road presented a picturesque view of the distant summit and furrowed sides of Baba Dagh, the venerable Mons Cadmus of the ancients, from whose well-wooded sides many streams sent their waters to irrigate the gardens of Denizli.

This is a very small town, consisting of little else than bazaars and market-places, scarcely an inhabitant sleeping within its dark and gloomy walls; they live in their gardens and villas, which extend to a considerable distance towards the hills. The konak to which we were directed was nearly three miles from the town, and was formerly the yaïla or summer residence of the inhabitants; but about a hundred years ago an earthquake threw down a large portion of the town, and destroyed many of the inhabitants, upon which the survivors took refuge in their yaïla, where, finding themselves more secure, they have ever since continued to dwell, and have covered the intervening ground with gardens and houses. The population is now confined to 1200 Turkish houses, 120 Greek, and 35 Armenian; tanning and dying leather, as is also the case in most small Turkish towns, forms the principal occupation of the place; the colours used are chiefly red and yellow, and the inhabitants make a kind of morocco from sheep and goat skins, of which the latter are the most prized.

Monday, October 10.—I started early this morning with my tatar and a suriji to visit the ruins of Laodicea and Hierapolis; the former is now called Eski Hissar, about five or six miles to the north of Denizli; the ruins of the latter are about six miles farther N. by E., at Pambuk Kaléh, on the north side of the valley of the Lycus. Both these places have been visited by former travellers, their remains are more or less fully described by Smith, Pococke, Chandler, Cockerell, Arundel, and Leake; and few

particulars of any consequence have escaped their observation. Nothing can exceed the desolation and melancholy appearance of the site of Laodicea; no picturesque features in the nature of the ground on which it stands relieve the dull uniformity of its undulating and barren hills; and, with few exceptions, its grey and widely scattered ruins possess no architectural merit to attract the attention of the traveller. Yet it is impossible to view them without interest, when we consider what Laodicea once was, and how it is connected with the early history of Christianity —a reflection which withdraws the mind from the gloomy scene presented to the eye, and leads it to meditate upon the past and the future. Its stadium, gymnasium, and theatres, one of which is in a state of great preservation, with its seats still perfectly horizontal, though merely laid upon the gravel, are well deserving of notice. Other buildings also on the top of the hill are full of interest, and on the east the line of the ancient wall may be distinctly traced, with the remains of a gateway; there is also a street within and without the town, flanked by the ruins of a colonnade and numerous pedestals, leading to a confused heap of fallen ruins on the brow of the hill about 200 yards outside the walls. North of the town towards the Lycus are many sarcophagi, with their covers lying near them partly imbedded in the ground, all having been long since rifled.

Amongst other interesting objects are the remains of an aqueduct, commencing near the summit of a low hill to the south, whence it is carried on arches of small square stones to the edge of the hill. Here also the water must have been much charged with calcareous matter, as several of the arches are covered with a thick incrustation. From this hill the aqueduct crossed a valley before it reached the town, but, instead of being carried over it on lofty arches, as was the usual practice of the Romans, the water was conveyed down the hill in stone barrel-pipes; some of these also are much incrusted, and some completely choked up.

It traversed the plain in pipes of the same kind; and I was enabled to trace them the whole way quite up to its former level in the town. Thus we have evidence that the ancients were acquainted with this hydrostatic principle of water finding its level when confined in a close pipe or drain of sufficient strength. The aqueduct on the hill appears to have been overthrown by an earthquake, as the remaining arches lean bodily on one side, without being much broken. At the spot where it reaches the town is a high conical wall picturesquely covered with incrustations and water-pipes of red clay, some of which are completely choked up; the remains of what appeared to have been another water-tower were not far distant.

The stadium, which is in a good state of preservation, is near the southern extremity of the city. The seats, almost perfect, are arranged along two sides of a narrow valley, which appears to have been taken advantage of for this purpose, and to have been closed up at both ends. Towards the west are considerable remains of a subterranean passage, by which horses and chariots were admitted into the arena, with a long inscription over the entrance.* Near the east end are the ruins of a massive pile of building, the plan of which can be distinctly traced, the walls still standing to a considerable height.

The whole area of the ancient city is covered with ruined buildings, and I could distinguish the sites of several temples, with the bases of the columns still *in situ*. Strabo says that although formerly an inconsiderable place, it had risen to great importance just before his time; thus the ruins bear the stamp of Roman extravagance and luxury, rather than of the stern and massive solidity of the Greeks. The celebrity of the place he attributes to the fertility of the soil and the wealth of some of its inhabitants: amongst whom Hiero, having adorned the city with many beautiful buildings, bequeathed to it more than 2000 talents at his death. Together with Apamea, Colossæ, and Hierapolis, Laodicea

* See Appendix, No. 207.

is named by Hierocles amongst the towns of Phrygia Pacatiana; but it is interesting chiefly as being one of the Seven Churches of Asia Minor to whose heads or bishops the mysterious prophecies contained in the Revelation of St. John were addressed. It is also mentioned occasionally by the Byzantine writers; Nicetas of Chonæ says that the Emperor Manuel Comnenus passed through it on his way to Colossæ and Apamea.

Leaving these ruins we descended into the valley of the Lycus, and, after crossing a small stream from the south, below the ruins of an ancient bridge, we turned north to traverse the alluvial plain which intervenes between Laodicea and Hierapolis. Shortly before reaching the Lycus or Tchoruk Sú, which flows through the middle of the plain, we passed, close to the road side, the half-ruined trunk of one of the most gigantic plane-trees I had ever seen, but being rather split open, the measurement of the circumference would not have given a correct idea of its size. Without wishing to assert that this is the identical tree, it may be mentioned as a singular circumstance that Herodotus relates that Cyrus, in his march from Colossæ to Sardis, which must have been in this direction, was also struck with a magnificent plane-tree, the care of which he committed to one of his immortal guards.*

After crossing the muddy Tchoruk Sú, the site of Hierapolis became more and more conspicuous, and the snowy whiteness of the incrusted cliffs more distinguishable. This deposit is formed by streams from the hot springs within the city falling over the perpendicular face of the cliff, where I could distinctly trace six different cascades, each of which had left a separate line of incrustation. In the low lands between the river and Hierapolis are many cotton-fields: the white pods were just beginning to open; and the tall and slender stems and graceful leaves had an agreeable and rich appearance.

A natural causeway, formed by the deposit of the petrify-

* Lib. vii. c. 31.

ing stream, led to a wretched village at the foot of the cliff; this, consisting entirely of a solid incrustation, supported a terrace, on which the ancient city had been built; nor could a finer or more commanding situation be well imagined. The white patches marked the more recent courses of the streams, where the projecting masses of deposit rest against the cliff like gigantic buttresses; many natural ducts extend into the plain, intersecting each other, and forming solid walls of stone broad at the base, and enclosing hollow spaces; these are gradually filling up with the deposit of the water collected in them. Ascending the cliff by a rocky path to the east, we passed a curious bridge formed by the calcareous stream, and extending over the ravine below by the continual advance of the deposit, while the stream flowing at the bottom has kept its bed clear, and reduced the deposit into the form of an arch; a similar bridge is formed in the neighbourhood of Clermont in Auvergne, by a stream charged with calcareous matter.

But if the appearance of the incrusted cliff was curious when viewed from below, it became infinitely more so when we looked down upon it from the road, and the detail of its structure became more apparent. The wavy and undulating lines of solid matter which extend over the surface look as if a large river had been suddenly arrested in its course, and converted into stone. These lines, however, are caused by an innumerable number of little basins or circular steps about two feet in diameter, no two of them exactly on a level. Each of these steps has a small ledge or rim round its edge, and keeps in a pool of water. Besides this remarkable appearance, beautiful stalactitic deposits hang from the lip of every basin, formed by the principal cascade, and add to its effect by the many strange and fantastic forms assumed by the hardened matter.

I was much struck with the grandeur of the ruins of the Palæstra or gymnasium on the point of the terrace where the principal cascade falls over the cliff. The whole area of the town is covered with ruins of a more imposing character

and form than those of Laodicea,—it may indeed be called a town of ruined palaces and temples. The effect is considerably heightened by the singular beauty of its position; the broad terrace on which it stands, extending from S.E. to N.W., is bounded on the N.E. by a range of lofty mountains, while to the W. and S. the eye wanders undisturbed over a vast extent of productive plains, and rich pastures, to the range of Cadmus to the S.S.W.

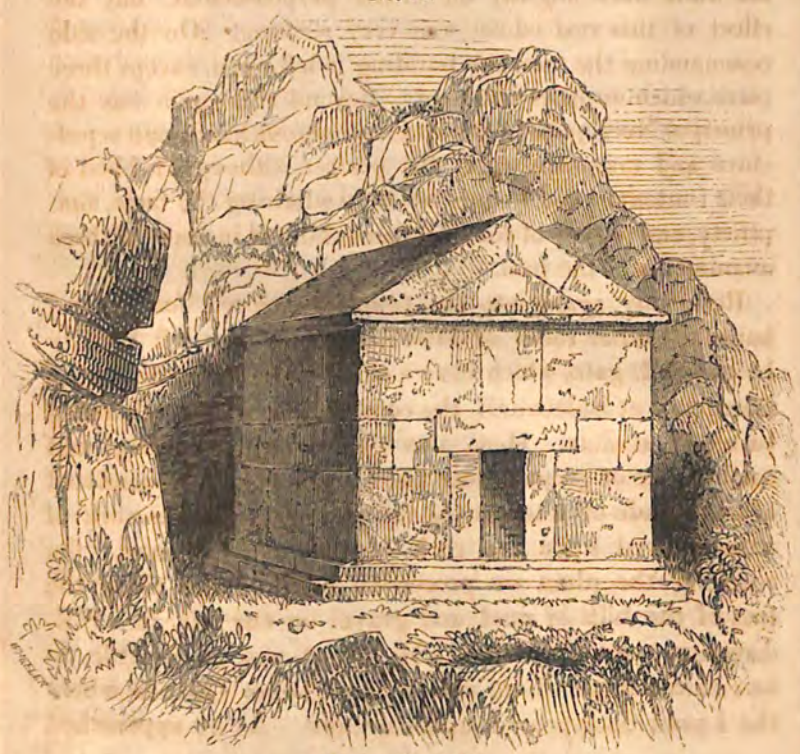
These ruins have been visited and partly described by former travellers, particularly by Smith, Pococke, Chandler, and Cockerell, the latter of whom has given a plan of the foundations of the gymnasium, now in part silted up by the calcareous deposit; the springs being no longer kept within proper bounds and channels by the care of a religious population, have for many centuries flowed unrestrained, and spread their waters over the terrace and ruins, thus reducing them to a perfect level. The hot spring rises in a deep pool above the gymnasium; at the bottom of it I could perceive traces of a colonnade of beautiful fluted columns, as perfect as when first thrown down. They probably once surrounded the sacred fountain, and now look like the ruins of a naiad's palace. Large fragments of architraves and friezes, some slightly incrusted, lie there also; while in other places huge mushrooms of calc-sinter rise up in the middle of the pool, no doubt concealing other valuable relics. For some distance round the opening the ground sounded hollow, being apparently only a crust formed over the water, the heat of which appeared to be about 100° Fahr., but I had no thermometer with me: it was not too hot, however, to prevent some Turks from bathing in it.

In a hollow of the hills to the N. are the ruins of one of the most perfect ancient theatres to be seen in Asia Minor, from whence the view is very extensive. It faces the S.W., and overlooks the ruins of the gymnasium situated on the edge of the terrace. This extends above a mile from S.E. to N.W., having a projecting mass at each end formed by the sediment of the calcareous water. It is covered with ruins, as well as the lower slope of the hills; in one place

was a grand pile of arches, in another a colonnade, of which many columns were still standing; and again a fallen temple, with its columns and massive doorways half buried in the ruins. In all directions rows of columns, walls, and sideposts of doorways met the eye; but an air of ponderous taste pervaded every building, unrelieved by the light Ionic shaft or elegant Corinthian capital. The city walls might be traced for a considerable distance, stretching across the terrace from the cliff to the hill, as well as along the edge of the former, where they are of Hellenic construction; in general they are formed of fragments of former edifices, with many columns and sepulchral monuments.

Beyond the city walls to the E. and S. were also many interesting sepulchral monuments of large dimensions and imposing style. The accompanying woodcut is a representa-

No. 15.



[*Tomb at Hierapolis.*]

tion of one of the tombs built amongst the rocks, and formed of large blocks of stone. The height exclusive of the pediment is about ten feet, and the roof is formed of two long blocks on each side. They are, in fact, small buildings or mausolea of stone, in the same style, although varying much in detail, with stone shelves inside, probably intended for urns and vases to contain the ashes of the dead. Some few bore inscriptions, but too much injured to be copied.

Proceeding along the terrace, a magnificent Doric colonnade 200 paces long, with the bases of the columns still *in situ*, connect the north-west gate, with a triumphal arch, consisting of two gateways with a round tower on each side; beyond this again to the N.W. was another large building eighty paces long, with massive walls and open arches, as in the Basilica of Constantine in Rome. Some of the walls were slightly out of the perpendicular, but the effect of this vast edifice was very striking. On the side commanding the view the building is left open, except three piers which support the roof. Beyond this again was the principal Necropolis of the city; numerous handsome sepulchres and mausolea were still perfect, although robbed of their contents: and I could not help admiring the taste, simplicity, and variety of construction exhibited in many of these monuments of the past.

Returning again into the town I explored for several hours the other relics of Hierapolis, and then left the city by the S.E. gate, which bore a close resemblance to that of Blaundus, at Suleimanli, the construction of the arch being precisely similar. Here also were many sarcophagi and tombs; one of great beauty fixed against the rock consisted of the façade of a tetrastyle temple, with a trellis-work of stone carved upon the rock between the columns. On reaching the plain we proceeded several miles along the foot of the hills of sand and gravel on our left, in a S.E. direction towards Khonos. My object was, if possible, to ascertain whether there was any spot below Colossæ where the Lycus disappeared under ground. As we approached

Khonos, still seven or eight miles off on the other side of the plain, the different appearance of the country on the opposite hills, owing to two different streams from Mount Cadmus, was very remarkable—one is the source of Bounarbashi, flowing through the gardens and orchards of Khonos, fertilizing everything it touches, and producing the most luxuriant vegetation, while the other, enveloping whatever it approaches in its stony mantle, produces nothing but a barren rock.

After continuing along the foot of the hills for nearly eight miles S.E. we reached the Lycus, flowing from the east, between low arid hills; and having crossed it by a wooden bridge just below its emergence from a rocky chasm in the calcareous deposit, we proceeded some way up the left bank to within a mile of the mills of Ak Sú. Some Euruques upon the spot repeatedly assured me that the course of the river was nowhere subterraneous; and as night was approaching I was compelled to give up the search, and return in haste to Denizli, nine or ten miles off. There can, however, be no doubt that this is the Lycus, and that the chasm through which it flows has, at a former period, been concealed by the deposit of the petrifying streams. This opinion was confirmed by an Armenian of Denizli, who added the tradition that the river Tchoruk below the mills of Colossæ had once been covered over.

Returning to Denizli, after having crossed the Djok or Gieuk Bounar Sú, near its junction with the Lycus, by a narrow bridge, we halted to see the ruined khan called Ak Khan. It was now dusk, but the handsome and elaborate Saracenic architecture, lighted up by the fires and pine torches of some camel-drivers who were bivouacking under its walls, was seen to great advantage. After recrossing the river, and while looking for the high road to Denizli, we were delayed by the tatar falling backwards with his horse into a deep ditch, where he lay for some time on his back, and the horse was nearly drowned. My steed too got away in the dark whilst I was assisting my companion, and I had

to ford a river on foot in pursuit of him. We then ascended the valley of the Gieuk Bounar Sú, also called the Sultan Emir Chai, for some way, and, crossing by a stone bridge to the left bank, we continued along a narrow path between the river and the hills, until we entered a lateral valley, following the banks of a small stream as high up as Denizli.

The next day, October 11, we were compelled to remain there, to enable the tatar to put in order his saddle and wardrobe, which had suffered much from his adventure last night. A great part of the day was spent in writing up my journal, and in inquiring for coins; many are found amidst the ruins of Laodicea, chiefly belonging to that town; most of those which I got were autonomous, and of small size.

CHAPTER XXX.

Leave Denizli—Sarai Kieui—Kash Yeniji, anc. Tripolis—Hot Baths—Carura—Kuyuja—Antiochia ad Mæandrum—Nazeli Bazaar—Mastaura—Buyuk Nazeli—Road to Aïdin Ghieuzel Hissar—Yacoub Pacha—Monopoly—Plague at Tiréh—River Lethæus—Mountain pass—Aiasaluck—Cayster—Phyrites—Plain of Metropolis—Fortona—Trianda—Sedi Kieui—Reach Smyrna.

WEDNESDAY, October 12.—Denizli to Sarai Kieui four hours. Wishing to revisit the site of Laodicea, I sent off the baggage by the direct road to Sarai Kieui under the care of the tatar, and took Giuseppe with me to assist in measuring the gymnasium and other buildings. The west side of the town is bounded by a deep ravine, watered by a stream, which may be either the Caprus or the Asopus of the ancients. Amongst the ruins I observed many fine specimens of the Lacertus Crocodilus, some of them eighteen or twenty inches long. Their brown scales are exceedingly rough, and a row of hard excrescences extends along the ridge of the back; their scales too are so stiff and prominent that when they get into a hole it is impossible to pull them out backwards.

After proceeding over a low range of hills for about five miles N.W. from Laodicea, we descended into the extensive plains of the Lycus and the Mæander, and reached the village of Sarai Kieui in three hours from Laodicea. It lies in the centre of a plain celebrated for the quality and quantity of its cotton, which the Turks, sitting before their doors, were employed in picking from the seeds and husks.* The village is a mile and a half S. of the Mæander, and contains about 300 houses, most of them Turkish.

* The price of raw cotton in the shell or husk is from two to three piastres per oke, or 2½*d.* per lb.; when cleaned from the husk, it varies from five to eight, according to its quality. When the crop is gathered, the plants are pulled and given as fodder to the cattle.

In the evening, at the tatar's entreaty, I sent for some dancing-boys, who are in great repute here. They come principally from Aïdin Ghieuzel Hissar, and go by the name of Kútchúk, or little, a term as inappropriate as that of boys, for they had all the appearance of full-grown men. Their dancing was not graceful, yet the old Turk was delighted with the performance. It consisted chiefly of violent contortions of the body, and had, at least, the merit of being difficult; their long clothes and tunics gave them an air of great effeminacy.

Thursday, October 13.—I started early this morning to visit the ruins of Tripolis for the purpose of fixing their position by a meridian altitude. They are situated near the village of Kash Yeniji, six or seven miles N.N.E. of Sarai Kieui, and near the spot where the Mæander emerges from a deep ravine, and enters the extensive plains through which it flows almost uninterruptedly to the sea. Half an hour N. of Sarai Kieui we crossed the muddy and winding river, flowing slowly in a deep channel through the alluvial soil of the plain; I was told it was full of fish. The bridge was narrow and dangerous, the thin planks laid across were quite loose, and presented such gaps between them, that we were recommended to cross it on foot. From thence we turned E. to avoid a long ridge of hills extending into the plain from the W.; we then proceeded nearly due N. for three or four miles until we reached Tripolis, situated in latitude 38° 1′ N. The ruins themselves are unimportant; they occupy the foot of a sloping hill, close to the northern limits of the plain about a mile to the E. of Kash Yeniji. The principal remains are parts of the city wall, a theatre, a large building at the S.W. corner, apparently a gymnasium, and the walls of another building near the theatre, containing three small windows. The theatre, which faced the W.S.W., seems to have been very large; it is now, together with the scena and proscenium, one mass of ruins; but part of the foundation still remains; small portions of the seats can also be distin-

guished, as well as eight or ten steps of a scala near the right wing. Traces of the vomitoria and other arched passages are also extant in the left wing, one of which leads from near the summit of the hill to the diazoma. In a ravine east of the town are several sarcophagi with their broken covers lying about, and many sepulchral chambers excavated in the white rock.

Ascending the valley of the Mæander, I visited a hot-spring (Ilijah) and bath, the building in which it rises being apparently Turkish. The water was extremely hot, and bubbled up in the centre, where a kind of mushroom font has been formed by the sediment. From thence the water escapes into the Mæander, but the peasants who cultivate the intervening ground do not seem to approve of its quality, as they have erected a wooden channel to carry it clear over their fields into the river. Having completed my survey I returned to Sarai Kieui, finding the heat most oppressive, as indeed it had been ever since I had entered the valley of the Mæander. The thermometer in a shaded verandah stood at 81° Fahr. at four P.M.

Friday, October 14.—Sarai Kieui to Kuyuja eight hours down the valley of the Mæander. The tatar, who was not satisfied with the horses, insisted on the menzilji, who vowed and protested to their worth, accompanying us. In about two miles N.W. we reached the banks of the Mæander, and after crossing it continued for some time along the foot of the barren hills on our right. The tatar's predictions were here verified, for one of the baggage-horses fell twice under his load; this so enraged Hafiz, that, rushing upon the poor menzilji, a thin helpless creature, he dismounted and discharged the full weight of his whip upon his shoulders: in the midst of his violence one of his pistols dropped upon the ground, which he immediately picked up, cocked, and presented at the unfortunate man's head; his rage was so great that he would probably have shot him had he not been stopped by one of the servants.

Ten miles below Sarai Kieui the valley is much narrower;

the Mæander flows between low sandy hills, uncultivated, and covered with the Agnus castus, now in full flower. This narrow pass is a place of great resort; we halted a short time at the café crowded with Xebeques and camel-drivers; on leaving it the valley immediately widened, the country assumed a different character, and vineyards and fig-orchards were abundant along the foot of the hills; the latter, however, had suffered much from the frost of the preceding winter; many of the trees were killed, and little or no crop was expected this year. The pass probably marked the boundary between Phrygia and Caria, and must have been near the site of Carura on the banks of the Mæander, a name which seems to indicate the frontiers of Caria, being perhaps derived from κᾶρων ὄῦρος (the boundary of the Carians). Here we entered the proper district of the Xebeques, and found them established at all the guard-houses and coffee-houses the whole way to Aïdin, five or six well-armed men being stationed by the government at each of these posts for the protection of travellers; but I believe they can act the part of thieves as well as thief-takers, according to circumstances; at least the Greeks of the neighbourhood, recollecting their former enormities, tremble at their name. They have been lately subdued, but are still the most ferocious-looking, dare-devil, impudent set of fellows I ever saw; their costume, as unique as it is picturesque, is only worn by the young men, the more aged contenting themselves with the simple attire of the Turkish peasant. The high turban towering above the head, with many folds and fringes and tassels hanging over the face, has a very swaggering look; numerous pistols, dirks, and yataghans adorn and set off their embroidered vests and sashes, while the tight white breeches, drawn into ample folds behind, betray an active and sinewy leg, contrary to all received notions of Turkish ideas of decorum.

The road was for some distance very stony, and the plain, covered with diluvial gravel, produced nothing but thorns and Agnus castus. On the south side of the Mæander the steep and almost barren hills rose directly from the water's

edge, so that the ancient road from Ephesus to Colossæ must, after leaving Antioch, have passed along the right or northern bank of the river; by degrees, however, the mountains retire, and the river flows through a rich alluvial plain. Six miles below the café we passed the graves of some impaled Xebeques, those robbers of the plain, with whom this country swarmed some years ago.

As we approached Kuyuja cultivation rapidly increased. Fig-orchards were numerous, and in the lower parts of the plain large tracts were covered with luxuriant crops of cotton and Indian corn. At four P.M. we reached Kuyuja, a village of 1000 houses, situated at the foot of rugged sand-hills which skirt the base of the lofty mountains of Messogis, resembling those which in the plain of Sardis extend along the northern foot of Mount Tmolus; both have been equally abraded by the effects of rain and weather into many fantastic forms of pinnacles and minarets and crumbling ruins. A small stream, issuing from a deep and narrow gorge to the east, traverses the lower part of the village, which, until three or four years ago, was only supplied with water from the Mæander two or three miles off. Yacoub Pacha of Aïdin, the head of the family of Kara Osman Oglu, gave 1000 purses, or 5000*l*., to construct pipes and an aqueduct, and excellent water is now brought to Kuyuja from the mountains. The Agha lodged me in his own konak; and his harem being empty, he gave it up to me for the night, nor was it without interest that I occupied this portion of a Turkish house: it was more secluded and private than those I had hitherto seen, having a separate court-yard opening into the larger one; instead of a verandah or open gallery, I found a large ante-room with sofas, communicating with the two principal apartments; there was also a private bath which opened into the room I occupied. The closely-latticed windows, too, which surrounded the room, and rendered it impossible either to see or to be seen from without, sufficiently indicated the class of inmates usually shut up within its walls.

Saturday, October 15.—I started early this morning to visit the ruins of Antiochia ad Mæandrum, situated between four and five miles S.E. of Kuyuja, on the south side of the plain, and near the mouth of the rich valley of the Kara Sú, which it commands, as well as the road to Ghera, the ancient Aphrodisias. After winding through fields of cotton and Indian corn, we reached the muddy banks of the Mæander, here about 100 feet across, and were immediately ferried over in an odd-looking triangular boat. The tolls belong to the Pacha of Aïdin, as representative of the supreme authority, but are let to a peasant for 3½ purses per annum, equal to 1750 piastres, or 17*l.* 10*s.* After crossing the river the road led through marshy pastures, interspersed with wood and jungle, in which cattle and horses were grazing, and where a large tribe of Euruques, who had just arrived with their flocks, were pitching their tents and taking up their respective quarters. Before reaching the hills we crossed the Yeniji Sú, apparently a branch of the Kara Sú, descending from the same valley, and flowing through a tangled underwood of reeds, tamarisks, and young plane-trees.

The remains of Antiochia ad Mæandrum are scarcely worth visiting as ruins, but their situation is pleasing, and the views over the fertile plain of the Mæander and the wooded valley of the Kara Sú are extremely striking. They consist of the massive walls of the Acropolis, and an inner castle, the style of which is rude and barbarous, consisting of loose rubble with a large proportion of cement, and without any real Hellenic character; but the existence of a stadium, built in the same style, proves its antiquity. To the east of the Acropolis are many remains of arches, vaults, and substructions of various buildings; while the stadium, extending from W.N.W. to E.S.E., runs along the side of the hill half a mile further. Its south side is formed by the natural slope of the hill, on which the seats are simply laid; but that to the north is raised upon a foundation of ma-

sonry, supported by vaulted arches sloping inwards, and still in a perfect state of preservation. After some search I found a hollow in the hill-side facing the north, which, although no remains of masonry were visible, clearly marked the site of an ancient theatre of small dimensions; the scena and proscenium were well defined by a raised mound of turf. A quick gallop brought me back to Kuyuja in time to obtain a meridian altitude; and while they were loading the baggage-horses I paid a visit to my hospitable host the Agha, who was both civil and intelligent.

In the afternoon we proceeded to Nazeli, a distance of only two hours; the heat was most oppressive, and it now became every day more intolerable as we descended the valley towards the sea. The road, generally stony, led near the foot of the rugged hills on the right, but the plain to the left was highly cultivated; the fig-tree and olive became more abundant at every step, the bright-green tints of the former contrasting strongly with the more sombre hues of the olive and the oak. At various points of the road we passed deep wells, now the only means of watering the cattle after the long drought, which had completely dried up the streams. Vineyards, too, were frequent, and the whole country bore a luxuriant clothing, as we approached the upper town of Nazeli, or Nazeli Bazaar, about a mile to the north of the principal town and residence of the Agha, which is called Lower or Great Nazeli. The latter is inhabited entirely by Turks, whilst Upper Nazeli, consisting of about fifty neat and independent Greek houses, contains the great bazaar, the chief rendezvous of all the cotton-growers and merchants of the district. Another staple produce of the neighbourhood are the figs which are sent to Smyrna to supply the European markets. Here they had not suffered so much from cold during the last winter as higher up the valley, and there was consequently a small crop, selling at 200 to 250 piastres the cantar or cwt., the usual price being 50 to 60 piastres. My host was the Greek banker, or Saraff, of

the Pacha of Aïdin, with whom, and his sister, who talked Italian fluently, and was a favourable specimen of Ionian beauty, I spent a very agreeable evening.

Amongst the cities of Caria, placed by ancient geographers between Tralles and Tripolis, was Mastaura,* a place of no great repute, but interesting from its extant coins, and its vicinity to a remarkable cave. In reply to my inquiries, I was told that, at the distance of a few miles to the N.E., amidst the hills, there was a small village called Mastaura, near which some interesting remains were reported to exist.† After some hesitation, I determined to visit the ruins on the following morning; although I was most anxious to reach Smyrna before the setting in of the autumnal rains.

Sunday, October 16.—Leaving Nazeli, we retraced our steps two miles due east, to a café, to procure a guide from the Xebeque who commanded the post; and, having obtained a fine specimen of Xebeque activity and dandyism, we took a northerly course up a dry torrent bed, and soon reached the modern village of Mastaura, containing fifteen or twenty houses, situated in a narrow ravine, amidst the sand-hills which skirt the base of Mount Messogis, and near the ruins of the konak of Halil Bey, once a famous chieftain in the district. About a mile above the village we reached some old walls and vaulted substructions, buried amidst the luxuriant foliage of evergreen oaks and olives; here I dismounted, and, passing through an arch, found myself in a circular enclosure, overgrown with trees, the extent of which was not much more than 100 feet in diameter; it was probably a theatre or amphitheatre. Other arches and substructions occurred in the vicinity, and to the east of the ravine was an arched and well-built vault of Hellenic blocks, nearly buried beneath the fallen ground, and concealed by brushwood and brambles, a small opening only being visible, through which I crawled in. On

* Strabo, lib. xii. Pliny, H. N. lib. v. 29. Hierocles, p. 659.

† Pococke's Travels, vol. ii. part ii. p. 67.

the summit of the overhanging lofty ridge, only accessible by a laborious ascent amidst ilex shrubs and other underwood, were more remains of walls of the same style and character as those below, apparently marking the site of the Acropolis. These ruins were constructed in the same style as those of Antiochia ad Mæandrum, which, had it not been for the remains of the stadium, I should have been disposed to attribute to a Byzantine era.

The bed of the ravine was dry, but in a cleft of the hill above the ruins we found a beautiful although rather scanty spring of fine cold water. This, or the stream below, must have been the source of the Chrysorrhoas, which, according to Steph. Byzant., supplied Mastaura with water. From thence we returned to Nazeli by a shorter road, amidst the wooded sand-hills. Finding it too late to proceed to Aïdin to-day, I spent the afternoon in visiting the bazaar, and the lower town, at each of which places I found an inscription.* The town contains about 1000 Turkish houses, and is a clean, cheerful place; and in the court-yard of one of the mosques I saw some fine fragments of fluted columns. While wandering about the streets with my Greek host, we fell in with a Turkish procession, preceded by a long train of armed Xebeques and musicians, escorting a Mahometan child six years old, the son of a neighbouring proprietor; he was returning on a gaily-caparisoned horse, led by two men, from the mosque, where he had undergone the ceremony of circumcision. On entering the court-yard of one of the mosques, I found an old Imaum reclining beneath the shade, with books and writing materials before him, who, after a few words of welcome, began an unintelligible theological discussion respecting the existence of two gods, one of whom, he said, dwelt above, and the other below; but whether he meant the devil or not I could not ascertain, as, unfortunately, Giuseppe was not with me, and my Greek companion was but a sorry substitute for an interpreter. He also asked me whether I believed that Adam was the

* See Appendix, Nos. 208 and 209.

first man: I regretted that I had not acquired a greater facility in talking Turkish.

The heat to-day was quite overpowering, as the following statement will show, the thermometer being placed in the draught of an open window to the north.—Noon 83° Fahr.; 2 P.M. 86; 4 P.M. 87; 6 P.M. 83; 7 P.M. 78. In the evening a shaded walk beneath my window was the favourite rendezvous of the young women of the village. They were all good-looking, but one of them, about 22 or 23 years of age, was a perfect specimen of Lydian or Ionian beauty. A sculptor might have chosen her face as a model for a Venus or a Diana. My Greek host and his sister had surprised me much by the extent of the information they possessed and the anxious wish they showed for more, on a great variety of subjects, convincing me that the Greeks have great capabilities for knowledge and acquirements, if their mental faculties were allowed to expand, and their energies well directed; but, owing to the want of education and of an enlightened government, their moral character is at present at a very low ebb.

Monday, October 17.—Nazeli Bazaar to Aïdin Ghiuzel Hissar eight hours.* The road by which we travelled amongst vineyards, olive-grounds, and fig-plantations, was excellent the whole way to Aïdin, and with very little trouble might be made practicable even for carriages. It was bounded on each side by high hedge-rows full of lofty reeds, forming an agreeable shade. Two miles from Nazeli we were opposite the valley of the Harpa Sú (the Arpasus of the ancients), on the south bank of the Mæander. Numerous guard-houses, coffee-houses, and huts were passed at regular distances during the course of the day, the latter well supplied with large earthenware jars filled with water for the use of travellers. At the fifth mile many shafts of fluted Doric columns were lying in

* The proper name of the town is Ghieuzel Hissar, but it is called Aïdin Ghiuzel Hissar, as being in the province of Aïdin, and to distinguish it from others of the same name, signifying Beautiful Castle. It is often called simply Aïdin.

a burial-ground near the road-side: and similar remains occurred in other places along the road. At the sixth mile we passed the village of Akcha Bazaar, near the stony bed of a torrent then completely dry. In the village were many marble blocks evidently derived from some ancient edifice, probably at no great distance. At the ninth mile we crossed a small stream flowing down from the hills on the left, on which the town of Sultan Hissar was pointed out, where are considerable vestiges of antiquity, which, although supposed by Chandler to be those of Tralles, in all probability mark the site of Nysa, from whence the remains in the neighbouring burial-grounds may have been derived. Three miles further we reached a small village called Chifteh Café, consisting entirely of coffee-houses and huts for halting. Near it were the konak and gardens of a Bey, the latter apparently well cultivated and surrounded by a high wall.

Our road ran chiefly along the undulating ground sloping towards the Mæander, as it flowed through the flat alluvial plain on the left. The distribution of the vegetation, which appeared almost universal throughout this district, induced me to divide it into four or five distinct zones, as follows:— 1. The flat alluvial soil near the river, producing, where not marshy, cotton, maize, and Indian corn. 2. The gentle slope between the plain and the rugged sand-hills, which may be divided into two sub-divisions, the lower and the upper; the former of which bears vines, figs, and corn, and sometimes, but rarely, oranges, while the latter produces olives, mastic, and oak. 3. The range of sand-hills furrowed into a thousand shapes, which skirt the foot of Mount Messogis, and which is scarcely cultivated; these produce little else but the valonea oak and ilex; and 4. The lofty chain of Mount Messogis itself, clothed with firs and pine-trees.

As we proceeded we passed many deep wells, the mouths of which were generally formed of the bases of ancient columns, hollowed out in the centre; a practice which became still more frequent as we approached Aïdin. At the six-

teenth mile I copied an imperfect inscription* on the wall of a fountain near a café; it appears to have been derived from a temple dedicated to Apollo: three miles farther we crossed a small stream, a striking contrast to the many dry watercourses we had this day passed. A short distance from the road towards the hills on the right were remains of a bridge over the stream, with traces of ruined walls near it; these probably mark the site of Acharaca, placed by ancient geographers between Nysa and Tralles, and celebrated for a beautiful grove and temple of Pluto, and a cave named Charonium, where cures were performed under the influence of Pluto and Proserpine. The slope of Mount Messogis above Acharaca was also celebrated for producing the best wine in the district.

By degrees the road, passing through a wooded and highly picturesque country, brought us nearer to the mountains, and it was almost with feelings of delightful anticipations of rain that I heard the distant thunder growling amongst the peaks of Messogis; no rain however fell, and during the succeeding night the stars shone forth as bright as ever. At length, after crossing the dry bed of a mountain torrent, we reached the straggling suburbs of Aïdin, situated at the foot of the table-land on which stand the ruins of the ancient Tralles. This plateau runs out considerably to the south of the chain of Mount Messogis, and appears to be the termination of the long belt of rugged sand-hills which I have already mentioned. Notwithstanding its proximity to Smyrna, so little was this country known in Chandler's time, that he has laid down these ruins as those of Magnesia ad Mæandrum, nor was the error rectified until the real and undoubted ruins of Magnesia were discovered, in 1803, by Mr. W. R. Hamilton, at Eyinéh Bazar, generally called Inek Bazar, situated much nearer the Mæander, and about fifteen miles W.S.W. from Aïdin. I was met outside the town by a chavasse, sent by the Pacha to conduct me to a konak prepared at his banker's house, a rich Rayah,

* See Appendix, No. 210.

brother to my host at Nazeli, and whose house was arranged in European style with tables, chairs, and curtains, and even a fourpost bedstead; I preferred however to sleep on my own mattress laid on the floor.

My host was naturally loud in his praises of Yacoub Pacha, the head of the family of Kara Osman, and who was universally admitted to be a good man and a kind governor. Yet this must be received *cum grano*, for I have heard traits of his character from persons well acquainted with him, which would have consigned any man not a Turk to eternal disgrace. Nor had he set his face against that curse of Turkish administration—the introduction of monopolies. My landlord had purchased for his favourite servant (a German from Prague, who had been eighteen years in the country) the monopoly of selling coffee both raw and roasted, for which he paid 25,000 piastres—about 250*l.*; the saraff being in fact the monopolist himself, though the servant is the nominal vender. The consumption of coffee in Aïdin is 12,000 or 14,000 okes a-year, sold at nine piastres per oke raw, and twelve when roasted. This amount seems very small, and I should think underrated, when it is recollected that the place is said to contain 5000 or 6000 Turkish and 800 Greek houses.

The Greeks were loud in their complaints of the failure of the fig-crop; this is severely felt in a province which produces the best fruit of the kind. This year only 5000 cantars, of fifty-five okes each, were sent to Smyrna, instead of 100,000, the average annual amount. The Pacha himself was not undeservedly one of the greatest sufferers, as he was in the habit of buying up all the figs from the peasants and selling them at a large profit to the merchants of Smyrna. The organization of the Rediff, or national guard, was going on with great activity. Yacoub Pacha and seven other great Pachas of Anatolia had lately been raised to the rank and title of Mushir, or General, for the purpose of organizing these new corps, and a fresh distribution of some of the provinces had consequently taken place. The principal Pachas were

those of Aïdin, Kutahiyah, Angora, Koniyeh, Adalia, Siwas, Trebizond, and Erzerum.

Tuesday, October 18.—I remained in the house all day lying on the sofa, too unwell either to visit the ruins of Tralles or to pay a visit to the Pacha; but sent the tatar to make my excuses and to thank him for his attentions, for he has always evinced every disposition to show kindness to and cultivate the good opinion of Franks. It was my intention to have proceeded from hence to Smyrna across Mount Messogis by Tiréh and Baindir, but the plague had broken out at the former place, which might have compromised me at Smyrna, if I had taken that road, as the Pacha had established a strict quarantine for all persons coming to Aïdin from Tiréh. I therefore determined to go round by Aiasaluck; but here another difficulty arose, for, not being the regular post-road, the Menzilji refused to supply me with horses; and when I got them at last by application to the Pacha, I was obliged to pay forty piastres each, instead of twenty-four.

Wednesday, October 19.—The portion of the town of Aïdin in which the Turks reside is surrounded by a massive wall, in which, especially near the gate we passed through this morning, I observed many ancient fragments and broken columns. A little way outside the town one of the Pacha's tatars was performing quarantine on his return from Tiréh in an open field. The country was well cultivated, producing olives, figs, and grapes in great abundance. At the fifth mile the road led along the foot of the steep ridge of Mount Messogis, consisting of mica schist and quartz, the plain being covered with boulders of quartzose conglomerate. A mile farther the road crossed a small stream issuing from a gorge in the mountains, up which led the road to Tiréh; we still continued due west over the undulating sandy hills sloping away to the south, and crossed several small mountain-streams, tributaries of the Mæander. At the tenth mile a low range of partly insulated hills of sand and gravel rose on our left, between us

and the river, above which to the S.W., at a distance of eight or ten miles, was a lofty range of schistose mountains, one of the southern branches of Mount Messogis. The road soon entered a district of wooded hills, partly cultivated, where fragments of marble blocks and other architectural remains occasionally occurred, which continued until, at the fifteenth mile, we descended into the valley of the Lethæus; this stream issuing from a deep and picturesquely wooded mountain glen in front, here suddenly turns to the south, and after passing through a marshy district flows under the walls of Magnesia ad Mæandrum, situated between four and five miles to the south.

Leaving the café, situated near a beautiful fountain, at the sixteenth mile, the wooded hills soon approached on either side, and we entered the narrow valley of the Lethæus. The bed of the river was almost concealed by the luxuriant plane-trees which overshadowed it, while the hills above were covered with pine-trees and mountain shrubs. After entering the ravine we crossed the stream several times, the scenery becoming more grand and beautiful at every step. Quitting the bed of the river we ascended the hills on the left bank, and enjoyed a splendid view of the surrounding country. The hills were clothed with magnificent forest trees, with an underwood of myrtles and arbutus, while the Lethæus on our left was flowing in its wooded glen almost immediately beneath us. The air was perfumed with the smell of the gum-cistus, and of the many aromatic plants on the opposite side of the mountain, where the Euruques were burning the woods, either for charcoal, or in order to extend the pasture for their flocks and herds; long lines of smoke upon the mountain-side marked where the work of destruction was going on.

At half-past three we reached a small café, but, finding no food for ourselves or horses, were obliged to go on to Aiasaluck, ten miles farther. We continued ascending for two miles more, until we reached the elevated plain of Akché Ova, covered with vineyards, and from which several streams besides

the Lethæus run off in various directions. Here we left the road to Scala Nuova, and after another steep ascent over thinly laminated beds of contorted argillaceous schist with a nearly vertical dip to the west, we reached the summit of the ridge; thence we began a steep descent over an ill-paved road, but amidst beautiful scenery, and surrounded by a great variety of aromatic plants. As we descended the valley gradually narrowed, water was collected in the beds of the ravines, and the vegetation became more luxuriant; the principal plants were myrtle, ilex, two species of arbutus, andrachne, gum-cistus of several varieties, plane-trees, heath, the judas-tree, oleanders, and many more. The aqueduct near the mouth of the ravine consists of three large arches, over which are six smaller ones; these last are certainly of the same age as the others, and not a more modern addition as suggested by Chandler; its purpose being to convey water to Ephesus, not to Aiasaluck.

Soon after leaving this spot, where I subsequently copied a Greek inscription,* we emerged from the valley and entered an open plain in part cultivated, and in part covered with Agnus castus; presently the picturesque and insulated hill of Aiasaluck appeared in sight, crowned with a ruined castle, and covered with the remains of the Turkish town which rose into existence when Ephesus was destroyed. It was dark before we reached the village, where after much difficulty we were established in an empty house consisting of one room, and a terrace over the stable. As I did not stop to see the ruins of Ephesus, intending soon to visit them from Smyrna, I shall reserve all notice of them for a future page. The evening was warm and mild; the thermometer at 7 P.M. was 76°, and the moon shone forth in all her brilliancy, throwing a gentle light on the baths and mosques visible above the low bushes around us. The present village of Aiasaluck consists of half a dozen miserable huts, and coffee-houses, the resort of caterjis and camel-

* See Appendix, No. 211.

drivers, where a few hard eggs and still harder bread are the only provisions to be obtained.

Thursday, October 20.—While the horses were being laden I took a hasty view of the celebrated gate on the Acropolis. The bas-reliefs which have been let into the wall immediately above the arch have been ascertained to belong to ancient sarcophagi, which must have been placed there at a period long subsequent to the time when they were executed; and as they apparently belong to the period of the decline of Roman art, it is evident that the gate itself must be still more recent, and therefore probably belongs to the Byzantine æra. Many other fragments of ancient architecture have also been used in the wall, which surrounds the hill at a lower level than the Turkish castle. This is another proof of the error of charging upon the Turks the destruction of all the celebrated monuments of antiquity. Undoubtedly they often have aided, and still continue to help on the work of annihilation, but the first blow was struck by the ignorance and the bigotry of the Byzantine Christians; and for this the only excuse is, that it was done during a period of universal oppression, and when ignorance and bigotry overran even the most civilized portion of the globe.

Leaving Aiasaluck and passing to the east of the hill, our road led us close to the long aqueduct which once supplied this place with water. It consists of many lofty slender piers of marble supporting the remains of brick arches. In the marble piers many Greek and Latin inscriptions are to be seen, such blocks of marble appearing to have been especially selected by the builder. A mile and a half farther we crossed the Cayster by an old bridge, and entered its celebrated plain; the river, which is said to abound in fish, was now low. This Caystrian plain is perfectly flat, and as we crossed it diagonally to the N.E. it seemed to differ in a remarkable manner both from that of the Mæander, and from that of the Hermus near Sardis.

The rich alluvial soil both to the north and south, instead of being skirted by a range of intervening wooded hills, as in the valleys of the two last-mentioned rivers, abuts at once on the steep limestone mountains, by which it is bounded.

On the north many traces of quarries are visible in the mountain-side, as also the remains of an ancient road cut in the solid rock at its foot, and now upon a level with the plain; its appearance is striking, and the marks worn by wheels are very apparent. When this road was originally made, the plain was probably at a much lower level than at present, and the road was carried along the face of the rock, on the edge of a steep precipice, to avoid the inundations to which the plain was exposed. Between five and six miles from Aiasaluck, changing our direction from N.E. to N.N.W., we passed round the eastern foot of Mount Gallesus, on the lofty and almost inaccessible summit of which is perched the solitary castle of Getchi Kaléh: I am not aware that any traveller has visited it, although it would be interesting to ascertain whether such a conspicuous point from all the surrounding country is Hellenic, Byzantine, or even of a still later period.*

Our road gradually turned to the N.W., and leaving the valley of the Cayster we ascended a narrow plain watered by the Phyrites, which, after draining the plain of Tourbali, falls into the Cayster. The range of lofty hills continued on our left, while those on the right gradually disappeared or trended away to the east: at the tenth mile, after passing a café and a magnificent plane-tree, we entered the extensive plain of Tourbali. The suriji attempted to cross it, through a thick jungle of thorns and brambles in which wild boars are said to abound; but he lost his way, and we were compelled to retrace our steps, and

* Mr. Arundel suggests the possibility of its having been an old Persian watch-tower.

skirt the edge of the plain to the west at the foot of the wooded mountains. There is no outlet for the waters through this range, as is laid down in all the maps; an error, I believe, already corrected by Arundel: they escape by the Phyrites into the Cayster. When nearly opposite the village of Tourbali, which is about the middle of the plain, a small round hill was on our left, standing out in front of the mountain chain, and on which were considerable remains of buildings, particularly one which had the appearance of a fort or castle. I did not examine them myself, but Mr. Strickland, who had been there on a former visit, found decided traces of Hellenic walls, clearly marking the site of Metropolis, placed by the Itineraries half way between Ephesus and Smyrna. The name of the village and plain of Tourbali is evidently derived from that of Metropolis by some such process as this: Metropolis, Tropolis, Troboli, Torboli, Tourbali.

Two miles beyond these ruins we crossed the Phyrites, and soon reached the remains of an aqueduct, stretching across the plain from the hills to the N.E. at the foot of Mount Tartali; from hence a ride of four miles in an almost northerly direction over a flat plain covered with dwarf ilex and with a few patches of cultivation, brought us to the small and picturesque village of Fortona, where, in the absence of the Agha, Tashel Oglu, we were hospitably received by his nephew, and installed in his konak.

Friday, October 21.—My impatience to reach Smyrna was so great that I started at sunrise, having been up long before daybreak; and, after passing along the foot of a range of hills covered with ilex, myrtle, and valonea, reached Trianda, containing a few shops and huts, and watered by a beautiful stream, flowing S.W. into the Phyrites, of which it seemed to be the principal source. Beyond Trianda we crossed several wooded ridges with intervening streams, flowing into the sea between Sighajik and the Cayster. From these hills, which consist of arena-

ceous and calcareous conglomerates resting against the scaglia of Mount Tartali, we descended into the plain of Sedi Kieui, where the river Meles takes its rise, and after following it for some distance, crossed it below Sedi Kieui. It was now almost dry, and a few plants of oleander and Agnus castus were growing along its deeply furrowed banks, as we descended into the lacustrine basin of Budjah.

Before reaching the mills of Megálos Paradeisos we passed a large burial-ground covered with broken columns and large marble blocks, amongst which I searched in vain for inscriptions; we soon reached the custom-house, whence, after a little delay, we were allowed to proceed, and before twelve I had the pleasure of finding myself once more comfortably established in my old rooms at Madame Marracini's, with the additional satisfaction of receiving a large packet of letters from my friends in England, the accumulated treasures of the last five months. The accounts of the state of the plague at Constantinople were very alarming, the deaths amounting to several thousands per week. This was extremely discouraging, and filled me with uncertainty respecting the future progress of my travels in Asia Minor, as I had not yet learnt to look upon this fatal malady with the same indifference with which it is regarded by the predestinarianism of the Turks.

In one respect my arrival at Smyrna was particularly well timed, for on the same day the weather broke up, and the rain fell even before I was within the walls. I had been extremely fortunate in such a long continuance of fine weather, which alone enabled me to keep my journal of time, distances, and bearings, with any degree of regularity. I could not have continued this guide during the rainy season, and without it it would have been impossible to have compiled the map of my route with that confidence in its accuracy which I now feel, and which I trust will be received as my excuse for the very minute topographical details contained in this volume.

The reader will observe that my journey from Constantinople to Cars, and thence by Sinope and Angora to Smyrna, occupied just twenty-two weeks, from the 20th of May to the 20th of October, during which time I travelled upwards of 763 leagues, or 2289 miles. I always had seven or eight, and sometimes nine horses; and it cost me, as nearly as I can calculate, 23,400 piastres, or 230*l.*, including the expense of tatars and servants' wages.

END OF VOLUME I.

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ERRATA TO VOL. I.

Page 38,	heading,	*for*	AVARIANS	*read*	BAVARIANS.
„ 108,	passim,	„	Dorilæum	„	Dorylæum.
„ 116,	line 16,	„	Soosous	„	Sousous.
„ 122,	„ 11,	„	Bounarbashi	„	Bounar Bashi.
„ 153,	„ 8,	„	Bounarbashi	„	Bounar Bashi.
„ 197,	„ 22,	„	Kara	„	Kars.
„ 202,	„ 10,	„	Ardzea	„	Ardzen.
„ 265,	„ 24,	„	Aigios	„	Agios.
„ 382,	„ 16,	„	Sangiac	„	Sanjiac.
„ 397,	passim,	„	Angora	„	Ancyra.
„ 438,	line 33,	„	Limnœa	„	Limnæa.
„ 466,	„ 14,	„	Sitshanli	„	Sitzhanli.
„ 469,	„ 13,	„	former	„	latter.
„ 493,	„ 12,	„	Ketziburlu	„	Ketzi Borlou.
„ 496,	„	„	p. 494	„	496.
„ 495, „ 496, „ 497	passim,	„	Ketziburlu	„	Ketzi Borlou.
„ 533,	line 21,	„	Ghiuzel	„	Ghieuzel.

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